

UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF ILLINOIS

COLLEGE RETIREMENT EQUITIES FUND :  
(CREF STOCK ACCOUNT; CREF GLOBAL :  
EQUITIES ACCOUNT; CREF GROWTH :  
ACCOUNT), TIAA-CREF FUNDS (TIAA-CREF :  
LARGE-CAP GROWTH FUND; TIAA-CREF :  
EQUITY INDEX FUND; TIAA-CREF LARGE- :  
CAP GROWTH INDEX FUND; TIAA-CREF :  
QUANT LARGE-CAP GROWTH FUND; TIAA- :  
CREF GROWTH & INCOME FUND; TIAA-CREF :  
S&P 500 INDEX FUND), TIAA-CREF LIFE :  
FUNDS (TIAA-CREF LIFE GROWTH EQUITY :  
FUND; TIAA-CREF LIFE STOCK INDEX; TIAA- :  
CREF LIFE GROWTH & INCOME FUND), :  
NUVEEN INVESTMENT FUNDS, INC. :  
(NUVEEN DIVIDEND VALUE FUND; NUVEEN :  
LARGE-CAP SELECT FUND), NUVEEN CORE :  
EQUITY ALPHA FUND, NUVEEN :  
INVESTMENT TRUST (NUVEEN EQUITY :  
MARKET NEUTRAL FUND), NUVEEN S&P 500 :  
BUY-WRITE INCOME FUND, NUVEEN :  
INVESTMENT TRUST II (NUVEEN EQUITY :  
LONG/SHORT FUND; NUVEEN WINSLOW :  
LARGE-CAP GROWTH ESG FUND on behalf of :  
itself and as successor to NUVEEN LARGE-CAP :  
GROWTH FUND, NUVEEN GROWTH FUND, :  
and NUVEEN SYMPHONY LARGE-CAP :  
GROWTH FUND), NUVEEN S&P 500 DYNAMIC :  
OVERWRITE FUND, NUVEEN DOW 30<sup>SM</sup> :  
DYNAMIC OVERWRITE FUND, and NUVEEN :  
GLOBAL INVESTORS FUND PLC (NUVEEN :  
WINSLOW U.S. LARGE-CAP GROWTH ESG :  
FUND), :  
Plaintiffs, :  
v. :  
THE BOEING COMPANY, DENNIS A. :  
MUILENBURG, and GREGORY D. SMITH, :  
Defendants.

**COMPLAINT AND JURY DEMAND**

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Plaintiffs College Retirement Equities Fund (CREF Stock Account; CREF Global Equities Account; CREF Growth Account), TIAA-CREF Funds (TIAA-CREF Large-Cap Growth Fund; TIAA-CREF Equity Index Fund; TIAA-CREF Large-Cap Growth Index Fund; TIAA-CREF Quant Large-Cap Growth Fund; TIAA-CREF Growth & Income Fund; TIAA-CREF S&P 500 Index Fund), TIAA-CREF Life Funds (TIAA-CREF Life Growth Equity Fund; TIAA-CREF Life Stock Index; TIAA-CREF Life Growth & Income Fund), Nuveen Investment Funds, Inc. (Nuveen Dividend Value Fund; Nuveen Large-Cap Select Fund), Nuveen Core Equity Alpha Fund, Nuveen Investment Trust (Nuveen Equity Market Neutral Fund), Nuveen S&P 500 Buy-Write Income Fund, Nuveen Investment Trust II (Nuveen Equity Long/Short Fund; Nuveen Winslow Large-Cap Growth ESG Fund on behalf of itself and as successor to Nuveen Large-Cap Growth Fund, Nuveen Growth Fund, and Nuveen Symphony Large-Cap Growth Fund), Nuveen S&P 500 Dynamic Overwrite Fund, Nuveen Dow 30<sup>SM</sup> Dynamic Overwrite Fund, and Nuveen Global Investors Fund PLC (Nuveen Winslow U.S. Large-Cap Growth ESG Fund) (collectively the “TIAA Plaintiffs”) are purchasers of the common stock of The Boeing Company (“Boeing” or the “Company”). The TIAA Plaintiffs, through their undersigned attorneys, by way of this Complaint and Jury Demand, bring this action against Defendant Boeing and certain of its former and current executive officers, Dennis A. Muilenburg (“Muilenburg”) and Gregory D. Smith (“Smith” and, together with Boeing and Muilenburg, “Defendants”), and allege the following upon personal information as to themselves and their own acts, and upon information and belief as to other matters.

The TIAA Plaintiffs’ information and belief is based on, *inter alia*, an investigation by their attorneys, which includes, among other things, a review and analysis of: Boeing’s public filings with the United States Securities and Exchange Commission (“SEC”); Boeing’s press releases and public statements; Boeing’s earnings call transcripts and transcripts of presentations, media, and

analyst reports concerning Boeing; documents publicly filed in *In re The Boeing Co. Aircraft Securities Litigation*, No. 1:19-cv-02394 (N.D. Ill) (the “Class Action”), *In re The Boeing Co. Derivative Litigation*, C.A. No. 2019-0907 (Del. Ch.) (the “Derivative Action”), *United States of America v. The Boeing Company*, No. 21-cr-005 (N.D. Tex.) (the “Criminal Action”), and *United States of America v. Mark A. Forkner*, No. 21-cr-268 (N.D. Tex.) (the “Forkner Criminal Action”); and other publicly available documents concerning Boeing, including the United States House Committee on Transportation and Infrastructure’s Final Committee Report, *The Design, Development & Certification of the Boeing 737 Max*, dated September 2020 (the “House Committee Report”), and the United States Senate Committee on Commerce, Science, and Transportation’s Committee Investigation Report, *Aviation Safety Oversight*, dated December 2020 (the “Senate Committee Report”).

Many of the facts supporting the allegations contained herein are known only to Defendants or are exclusively within their custody and/or control. The TIAA Plaintiffs believe that further substantial evidentiary support will exist for the allegations in this Complaint after a reasonable opportunity for discovery.

#### **NATURE OF THE ACTION**

1. This is an action to recover significant investment losses suffered as a result of the fraud that Defendants perpetrated concerning the Boeing 737 MAX. The TIAA Plaintiffs purchased Boeing common stock in reliance on representations made by Defendants that were later revealed to be materially false and misleading. When Defendants’ fraud was gradually revealed to the market, the TIAA Plaintiffs suffered significant damages.

2. Boeing is one of the world’s largest aerospace firms and produces commercial airplanes for airlines worldwide. As has now been revealed through numerous investigations,

including by the United States House of Representatives, United States Senate, United States Department of Justice (“DOJ”), United States Federal Aviation Administration (“FAA”), and National Transportation Safety Board (“NTSB”), Defendants manufactured an airplane, the 737 MAX, sacrificing safety for profits, which tragically resulted in the death of 346 airline passengers, crew, and a rescue diver.

3. The 737 MAX was a remodeled version of one of Boeing’s other airplanes and was rushed to market to compete with a new, more fuel-efficient airplane that Boeing’s competitor, Airbus SE (“Airbus”), had released. To make the 737 MAX just as fuel efficient as Airbus’s airplane, Boeing installed a larger engine, which changed the airplane’s aerodynamics. Rather than fix the aerodynamics through structural changes to the airplane – which would have been time consuming, expensive, and prevented the 737 MAX from being quickly certified as a remodeled version of one of Boeing’s other airplanes – Boeing added a Maneuvering Characteristics Augmentation System (“MCAS”) to the airplane’s flight control software.

4. MCAS is an automated system that relied on data from one of two external sensors on the 737 MAX’s fuselage. If the sensor indicated that the airplane was pitched up too high and in danger of a stall, MCAS would level-out the airplane by automatically moving its nose downward.

5. MCAS’s only fail-safe was an alert on the 737 MAX’s flight display that was designed to illuminate if the two sensors feeding MCAS data disagreed with each other, suggesting a malfunction. However, approximately three months after the 737 MAX went into service, Defendants discovered that the alert was inoperable on 80% of the airplanes that had been delivered so far. Defendants withheld this information from regulators, its customers and investors, and the flying public, and decided to wait until 2020 – three years after discovering the

defect – to fix the alert. Boeing continued producing and delivering 737 MAXs with inoperable alerts in the meantime.

6. Although MCAS was extremely dangerous and had never been used on one of Boeing’s commercial airplanes before, Boeing repeatedly downplayed its importance to the FAA. That was because Boeing had promised its customers that pilots would not have to complete flight simulator training before they could operate the 737 MAX, and had even agreed to pay certain of them huge financial penalties if the FAA mandated such training. If the FAA thought that MCAS was nothing more than an extension of one of Boeing’s previously approved flight systems, it was more likely to mandate minimal training that pilots could complete on a computer or tablet, rather than require flight simulator training.

7. To avoid scrutiny of the new technology being added to the airplane, Defendants went as far as to remove all references to MCAS from the 737 MAX’s flight manual. They did so knowing that the process of overriding MCAS was complex and could result in “catastrophic” consequences if not performed quickly enough. Indeed, it had taken one of Boeing’s own test pilots more than 10 seconds to identify and disable MCAS.

8. Even worse, after Boeing applied for certification of the 737 MAX with the FAA, it made fundamental and deadly changes to MCAS that greatly expanded its scope and the circumstances under which it could activate. Defendants concealed these changes from the FAA, which led to the FAA certifying the 737 MAX and recommending the minimal level of pilot training that Boeing so desperately sought based on incorrect facts about MCAS.

9. Due in large part to the minimal level of pilot training required to operate the 737 MAX, it soon became Boeing’s bestselling airplane. However, Boeing employees struggled to keep up with the rigorous production rate and delivery schedule that Defendants had set. In June

2018, a Boeing plant supervisor-turned-whistleblower, Edward Pierson, informed the general manager of the 737 MAX program that he had serious quality and safety concerns about the 737 MAX due to the “schedule pressure” that Defendants had put on employees. Pierson told him, “all my internal warning bells are going off. And for the first time in my life, I’m sorry to say that I’m hesitant about putting my family on a Boeing airplane.”

10. Pierson’s concerns were ignored and, a few months later, on October 28, 2018, Lion Air flight 610 crashed into the Java Sea 12 minutes after takeoff, killing everyone onboard. The cause of the crash was a mystery to everyone except Defendants, who knew almost immediately that MCAS was to blame.

11. Nevertheless, over the next five months, Defendants repeatedly reassured investors that the 737 MAX was safe. Defendants also cast aspersions on the Lion Air pilots and told flight crews that they could deactivate MCAS by simply following “existing procedures” set forth in the 737 MAX’s flight manual. But MCAS was neither described in the 737 MAX’s flight manual nor had it ever been used on one of Boeing’s commercial airplanes before. No one even knew that MCAS existed until Defendants were later forced to admit that it was the reason for the Lion Air crash.

12. At the same time, Defendants boasted to the market that Boeing was ramping up its production rate for the 737 MAX, with more than 5,000 orders to date and a 4,000+ airplane backlog. These figures were divorced from reality. Defendants had been working on extensive, material changes to MCAS for months, and had many months to go before the Company could deliver a safe airplane to its customers. Defendants also knew that, once MCAS was fixed, pilots would have to complete the expensive and time-consuming simulator training that they had fought so hard to avoid in the first place. Moreover, and as set forth above, the 737 MAX was

fundamentally unsafe and had been certified by the FAA under false pretenses. Defendants knew or should have known that it was only a matter of time before the truth started to emerge and, when it did, the FAA would ground the 737 MAX.

13. On March 10, 2019, the faulty and defective MCAS caused another airplane to crash with devastating consequences. Ethiopian Airlines flight 302 crashed into a field at nearly 700 miles per hour, creating a crater nearly 100 feet deep and killing all 157 people on board. The pilots followed the “existing procedures” that Defendants had emphasized in the months since the Lion Air crash, but they were unable to deactivate MCAS and regain control of the airplane.

14. International regulators immediately grounded the 737 MAX, and the FAA followed suit shortly thereafter. Incredibly, with 346 people now dead at the hands of MCAS, and knowing the cause of the two crashes, Defendants continued to represent to investors that the 737 MAX was safe.

15. As more information about the Ethiopian Airlines crash emerged, however, Defendants were forced to admit that they had been working on changes to MCAS to make the 737 MAX safer. Defendants then turned their efforts towards re-certification and the return of the 737 MAX to service. Over the next nine months, Defendants assured the market that the 737 MAX was on the verge of being re-certified and returning to the skies when the precise opposite was true. Defendants’ misstatements were so egregious that the acting FAA Administrator met with Defendant Muilenburg and asked him to “slow down [Boeing’s] talk of progress” so that FAA could exercise the appropriate level of scrutiny.

16. Defendants ignored this request and began making even more strident statements about the timeline for the 737 MAX’s return to service. The new FAA Administrator called another meeting with Defendant Muilenburg where he “reprimanded [him] for putting pressure on

the agency to move faster in approving the return of the [737 MAX].” The FAA Administrator also wrote directly to Congress explaining that Defendants’ return-to-service timeline was “not realistic” and expressing his concern that Defendants’ statements were “designed to force the FAA into taking quicker action.” Eventually, Defendants came to terms with the FAA’s timeline and halted production of the 737 MAX as its customers cancelled their orders or substituted in different airplanes.

17. Throughout this time period, Defendants represented in their filings with the SEC that Boeing was in compliance with all applicable FAA regulations and had effective internal disclosure controls and procedures. These statements were patently false. Boeing has admitted to conspiring to defraud – and in fact defrauding – the FAA during the certification process, and the FAA fined the Company millions of dollars for failing to abide by the terms of an earlier settlement agreement governing the Company’s regulatory compliance.

18. Boeing’s corporate culture – fostered by Defendant Muilenburg and his “tone at the top” – was one of deceit and the prioritization of profit over safety. As Boeing’s new Chief Executive Officer (“CEO”), David L. Calhoun, subsequently remarked to *The New York Times*, “I’ll never be able to judge what motivated [Defendant Muilenburg], whether it was a stock price that was going to continue to go up and up, or whether it was just beating the other guy to the next rate increase.” “If anybody ran over the rainbow for the pot of gold on stock, it would have been him,” Calhoun said.

19. From the very onset of the 737 MAX Program, Defendants Muilenburg and Smith and other members of Boeing management disregarded serious quality control and safety concerns expressed by Boeing employees in order to save money, quickly certify the airplane, and preserve the minimal level of pilot training that Defendants had promised Boeing’s customers. Indeed, the

Court in the Derivative Action has already found that Boeing “lack[ed] an internal reporting system by which whistleblowers and employees could bring their safety concerns to the Board’s attention.”

20. Additionally, and as discussed above, when Defendants learned in August 2017 that MCAS’s only fail-safe was inoperable on 80% of its airplanes, they withheld this information from regulators, Boeing’s customers and investors, and the flying public, and made the decision to produce and deliver defective airplanes for the next three years. Defendants similarly said nothing when they learned that Chief Technical Pilot Forkner had defrauded the FAA by misrepresenting the scope and operational capabilities of MCAS.

21. Defendants continued their practice of deceit even after the Lion Air and Ethiopian Airlines crashes in an effort to cover their tracks. The Senate Committee Report found that “Boeing officials inappropriately coached test pilots in the MCAS simulator testing contrary to testing protocol. This test took place over a year after the second 737 MAX crash and during recertification efforts. It appears, in this instance, FAA and Boeing were attempting to cover up important information that may have contributed to the 737 MAX tragedies.” The FAA also chastised Defendant Muilenburg for “putting pressure” on the agency to quickly re-certify the 737 MAX so that it could be returned to service. Defendants’ actions and failures to act reflect woefully inefficient internal disclosure controls and procedures.

22. Both Boeing and the 737 MAX’s Chief Technical Pilot, Mark Forker, were subsequently criminally charged for conspiring to defraud the FAA. On January 6, 2021, Boeing entered into a Deferred Prosecution Agreement (“DPA”) with the DOJ and agreed to pay more than \$2.5 billion for its role in the conspiracy.

23. The effect of Defendants' material misrepresentations and omissions was to artificially inflate the price of Boeing's common stock.

24. The TIAA Plaintiffs purchased Boeing common stock during the time when Defendants, unbeknownst to the TIAA Plaintiffs, were misrepresenting the 737 MAX's certification and re-certification, safety and reliability, production rate and backlog, and return-to-service timeline, as well as the true nature of MCAS, Boeing's regulatory compliance, and the effectiveness of Boeing's internal disclosure controls and procedures.

25. As the truth was slowly revealed to the market and the previously concealed risks materialized, the price of Boeing common stock plummeted, and the TIAA Plaintiffs suffered significant losses.

26. The TIAA Plaintiffs therefore bring this action under the federal securities laws to recover the investment losses they suffered as a result of Defendants' materially false and misleading statements and omissions of material fact.

#### **JURISDICTION AND VENUE**

27. The claims asserted herein arise under and pursuant to Sections 10(b) and 20(a) of the Securities Exchange Act of 1934 (the "Exchange Act"), 15 U.S.C. §§ 78j(b) and 78t(a), and Rule 10b-5 promulgated thereunder, 17 C.F.R. § 240.10b-5.

28. This Court has jurisdiction over the subject matter of this action pursuant to Section 27 of the Exchange Act, 15 U.S.C. § 78aa, and 28 U.S.C. § 1331.

29. Venue is proper in this District pursuant to Section 27 of the Exchange Act and 28 U.S.C. § 1391. Many of the acts giving rise to the violations complained of herein, including the dissemination of false and misleading information, occurred in this District. Boeing has its

principal place of business in this District and Defendants committed tortious acts and transacted business in this District.

30. In connection with the acts, transactions and conduct alleged herein, Defendants, directly or indirectly, used the means and instrumentalities of interstate commerce, including, but not limited to, the United States mails, interstate telephone communications and the facilities of a national securities exchange and market.

## **PARTIES**

### **I. Plaintiffs**

31. Teachers Insurance and Annuity Association of America (“TIAA”) was founded in 1918 and is a joint stock life insurance company incorporated in New York with its headquarters in New York. TIAA offers traditional annuities, as well as variable annuities that invest in, among other things, real estate, as well as mutual funds that invest in equities and fixed income securities. College Retirement Equities Fund (“CREF”), a companion organization to TIAA, is a not-for-profit membership corporation incorporated in New York with its principal place of business in New York. Together, TIAA and CREF constitute a Fortune 100 financial services organization that forms the principal retirement system for the nation’s education and research communities and one of the largest retirement systems in the world based on assets under management. As of December 31, 2021, TIAA served over 5 million individuals and managed more than \$1.3 trillion in assets.

32. Plaintiff CREF is a New York not-for-profit membership corporation whose investment advisor, TIAA-CREF Investment Management, LLC, has its main office in New York, New York. Plaintiff CREF purchased Boeing common stock during the relevant time period on behalf of CREF Stock Account, CREF Global Equities Account, and CREF Growth Account and

was damaged by Defendants' materially false and misleading statements and omissions of material fact.

33. Plaintiff TIAA-CREF Funds is a Delaware statutory trust whose investment advisor, Teachers Advisors, LLC, has its main office in New York, New York. Plaintiff TIAA-CREF Funds purchased Boeing common stock during the relevant time period on behalf of TIAA-CREF Large-Cap Growth Fund, TIAA-CREF Equity Index Fund, TIAA-CREF Large-Cap Growth Index Fund, TIAA-CREF Quant Large-Cap Growth Fund, TIAA-CREF Growth & Income Fund, TIAA-CREF S&P 500 Index Fund and was damaged by Defendants' materially false and misleading statements and omissions of material fact.

34. Plaintiff TIAA-CREF Life Funds is a Delaware statutory trust whose investment advisor, Teachers Advisors, LLC, has its main office in New York, New York. Plaintiff TIAA-CREF Life Funds purchased Boeing common stock during the relevant time period on behalf of TIAA-CREF Life Growth Equity Fund, TIAA-CREF Life Stock Index, and TIAA-CREF Life Growth & Income Fund and was damaged by Defendants' materially false and misleading statements and omissions of material fact.

35. Plaintiff Nuveen Investment Funds, Inc. is a Maryland corporation whose investment advisor, Nuveen Fund Advisors, LLC, has its main office in Chicago, Illinois. Plaintiff Nuveen Investment Funds, Inc. purchased Boeing common stock during the relevant time period on behalf Nuveen Dividend Value Fund and Nuveen Large-Cap Select Fund and was damaged by Defendants' materially false and misleading statements and omissions of material fact.

36. Plaintiff Nuveen Core Equity Alpha Fund is a Massachusetts business trust whose investment advisor, Nuveen Fund Advisors, LLC, has its main office in Chicago, Illinois. Plaintiff Nuveen Core Equity Alpha Fund purchased Boeing common stock during the relevant time period

and was damaged by Defendants' materially false and misleading statements and omissions of material fact.

37. Plaintiff Nuveen Investment Trust is a Massachusetts business trust whose investment advisor, Nuveen Fund Advisors, LLC, has its main office in Chicago, Illinois. Plaintiff Nuveen Investment Trust purchased Boeing common stock during the relevant time period on behalf of Nuveen Equity Market Neutral Fund and was damaged by Defendants' materially false and misleading statements and omissions of material fact.

38. Plaintiff Nuveen S&P 500 Buy-Write Income Fund is a Massachusetts business trust whose investment advisor, Nuveen Fund Advisors, LLC, has its main office in Chicago, Illinois. Plaintiff Nuveen S&P 500 Buy-Write Income Fund purchased Boeing common stock during the relevant time period and was damaged by Defendants' materially false and misleading statements and omissions of material fact.

39. Plaintiff Nuveen Investment Trust II is a Massachusetts business trust whose investment advisor, Nuveen Fund Advisors, LLC, has its main office in Chicago, Illinois. Plaintiff Nuveen Investment Trust II purchased Boeing common stock during the relevant time period on behalf of Nuveen Equity Long/Short Fund and Nuveen Winslow Large-Cap Growth ESG Fund (on behalf of itself and as successor to Nuveen Large-Cap Growth Fund, Nuveen Growth Fund, and Nuveen Symphony Large-Cap Growth Fund) and was damaged by Defendants' materially false and misleading statements and omissions of material fact.

40. Plaintiff Nuveen S&P 500 Dynamic Overwrite Fund is a Massachusetts business trust whose investment advisor, Nuveen Fund Advisors, LLC, has its main office in Chicago, Illinois. Plaintiff Nuveen S&P 500 Dynamic Overwrite Fund purchased Boeing common

stock during the relevant time period and was damaged by Defendants' materially false and misleading statements and omissions of material fact.

41. Plaintiff Nuveen Dow 30<sup>SM</sup> Dynamic Overwrite Fund is a business trust whose investment advisor, Nuveen Fund Advisors, LLC, has its main office in Chicago, Illinois. Plaintiff Nuveen Dow 30<sup>SM</sup> Dynamic Overwrite Fund purchased Boeing common stock during the relevant time period and was damaged by Defendants' materially false and misleading statements and omissions of material fact.

42. Plaintiff Nuveen Global Investors Fund PLC is an investment company established under UCITS regulations on behalf of Nuveen Winslow U.S. Large-Cap Growth ESG Fund whose investment advisor Nuveen Fund Advisors, LLC, has its main office in Chicago, Illinois. Plaintiff Nuveen Global Investors Fund PLC purchased Boeing common stock during the relevant time period on behalf of Nuveen Winslow U.S. Large-Cap Growth ESG Fund and was damaged by Defendants' materially false and misleading statements and omissions of material fact.

43. The TIAA Plaintiffs purchased Boeing common stock on and/or after July 26, 2017, and held Boeing common stock through and after March 10, 2019, when the first of a series of partial but inadequate disclosures was issued correcting the prior false and misleading statements and as the foreseeable risks previously concealed by Defendants' material misstatements and omissions partially materialized. As a result, the TIAA Plaintiffs were damaged by Defendants' materially false and misleading statements and omissions of material fact.

## II. **Defendants**

44. Defendant Boeing is a Delaware corporation with its principal place of business located at 100 N. Riverside Plaza, Chicago, Illinois 60606. Boeing's common stock is publicly traded in the United States on the New York Stock Exchange under the ticker symbol "BA." Boeing is one of the world's major aerospace firms and has four main business segments: Boeing

Commercial Airplanes (“BCA”); Boeing Defense, Space & Security; Boeing Global Services; and Boeing Capital. BCA develops, produces, and markets commercial airplanes worldwide.

45. Defendant Muilenburg was Boeing’s President, CEO, and a member of the Board of Directors during the relevant period. Defendant Muilenburg was also Boeing’s Chairman until he was stripped of that role in October 2019. Defendant Muilenburg was forced to resign as Boeing’s CEO and President, and from the Company’s Board of Directors, in December 2019 due to the misconduct alleged herein.

46. Defendant Smith was Boeing’s Chief Financial Officer (“CFO”) and Executive Vice President of Enterprise Operations, Finance, and Sustainability during the relevant period. Defendant Smith also briefly served as Boeing’s interim CEO after Defendant Muilenburg resigned. Defendant Smith retired from Boeing in July 2021.

### **FACTUAL ALLEGATIONS**

#### **I. Boeing Is Founded with an Emphasis on Engineering and Safety**

47. Boeing was founded more than 100 years ago by William Edward Boeing. Mr. Boeing was known to be a perfectionist and a stickler for accuracy, facts, and quality. According to his biography, soon after Mr. Boeing established the Company in 1916, he noticed improperly sawed wooden planks in his airplane building shop and walked all over them until they broke. A frayed cable caused him to remark, “I, for one, will close up shop rather than send out work of this kind.”

48. The Company’s first airplane, the Boeing Model 1, flew in June 1916. Boeing produced the first modern passenger aircraft in 1933, the B-52 Bomber in 1952, the Lunar Rover used to explore the moon in 1971, and large portions of the International Space Station.

49. Over the years, Boeing emerged as one of the world’s most esteemed engineering firms. Boeing employees described the Company as an “engineer’s paradise” where they could

innovate and create leading-edge technologies where safety was always at the forefront of engineering decisions that were part and parcel of the business development process.

## **II. Boeing Merges with McDonnell Douglas and Shifts its Focus from Safety to Profits**

50. Boeing merged with McDonnell Douglas in 1997. After the merger, Harry Stonecipher, the CEO of McDonnell Douglas, became Boeing's President and CEO. Stonecipher's stated goal was to shift Boeing's focus from solving difficult engineering problems to enhancing and expanding the Company's financial profits.

51. As Stonecipher told the *Chicago Tribune* in 2004, “[w]hen people say I changed the culture of Boeing, that was the intent, so it's run like a business rather than a great engineering firm. It is a great engineering firm, but people invest in a company because they want to make money.”

52. According to Boeing employees, the prowess of the engineers' designs and innovative diagrams were replaced by the accounting acumen and financial decisions of business executives. Production schedules and monetary costs, not technical specifications and safety considerations, began to drive Boeing's commercial aircraft programs.

53. Around this time, and likely as a result, Boeing saw a sharp rise in safety violations imposed by the FAA. Between 2000 and 2020, the FAA cited Boeing for 20 safety violations with penalties ranging between \$6,000 and \$13 million. Boeing's chief competitor, Airbus, was cited for only 3 safety violations during that same time.

54. In 2015, Boeing entered into a settlement agreement with the FAA to resolve thirteen pending and numerous other potential enforcement cases (the “Settlement Agreement”). Because Boeing's airplanes were certified by the FAA, Boeing was required to “maintain and implement a quality assurance program that has been approved by the FAA.” According to the

Settlement Agreement, the FAA identified numerous “apparent failures of corrective action” when monitoring Boeing’s compliance with its quality assurance program.

55. Boeing agreed to pay \$12 million to the FAA and to implement “significant systematic initiatives[] to strengthen its regulatory compliance processes and practices” over the next five years. Boeing committed to prioritizing safety as part of its settlement with the FAA. Specifically, Boeing pledged to improve its:

- Safety Management;
- Regulatory Compliance Plan;
- Organizational Designation Authorization (“ODA”) and Internal Auditing System for Regulatory Compliance;
- Specification Improvement;
- First Article Verification;
- Problem Solving and Sustainment;
- Accuracy of Stamping and Other Verifications;
- Quality of Submissions;
- Timeliness of Submissions;
- Audits of BCA Suppliers for Acceptance of Work Performed;
- Sustained Effectiveness of Implemented Letter of Investigation (“LOI”) Corrective Actions; and
- Compliance Reporting.

56. Boeing faced an additional \$24 million in penalties if it failed to fulfill its obligations under the Settlement Agreement.

57. Boeing announced the Settlement Agreement with the FAA on December 22, 2015. In a press release, the Company stated:

Boeing believes that this agreement not only fairly resolves announced and potential civil penalty actions – most of which date back years, and two of which were previously announced in 2012 and 2013 – but also will further enhance Boeing’s self-correcting quality and compliance systems. Under the terms of the agreement, Boeing has agreed to pay \$12 million and make additional quality and compliance process improvements. *Many of the improvements listed in the agreement have already been implemented or are in the process of implementation.*<sup>1</sup>

### **III. Boeing’s Regulatory Compliance and Reporting Obligations as a Public Company**

58. Under the regulations and guidance promulgated by the SEC, companies whose stock is publicly traded in the United States – such as Boeing – have important public reporting and disclosure obligations.

59. Public companies are required to file with the SEC certain disclosure documents containing comprehensive information about their business operations and financial condition. Investors generally rely on the accuracy and transparency of these disclosures – as well as other public statements made by the company – when determining whether to invest.

60. The following table sets forth the relevant filings that Boeing made with the SEC during the relevant period, the date they were filed with the SEC, which of the Defendants signed those filings, and how they are referred to throughout this Complaint:

Description of the Filing	Date of the Filing	Defendant Signatories to the Filing and/or Accompanying SOX Certifications	Abbreviation
Form 10-Q for the quarter ended June 30, 2017	July 26, 2017	Muilenburg and Smith	“2Q2017 10-Q”
Form 10-Q for the quarter ended September 30, 2017	October 25, 2017	Muilenburg and Smith	“3Q2017 10-Q”

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<sup>1</sup> Unless otherwise indicated, bold and italic emphasis used in quotations throughout this Complaint have been added and did not appear in the original quotation.

<b>Description of the Filing</b>	<b>Date of the Filing</b>	<b>Defendant Signatories to the Filing and/or Accompanying SOX Certifications</b>	<b>Abbreviation</b>
Form 10-K for the year ended December 31, 2017	February 12, 2018	Muilenburg and Smith	“2017 10-K”
Form 10-Q for the quarter ended March 31, 2018	April 25, 2018	Muilenburg and Smith	“1Q2018 10-Q”
Form 10-Q for the quarter ended June 30, 2018	July 25, 2018	Muilenburg and Smith	“2Q2018 10-Q”
Form 10-Q for the quarter ended September 30, 2018	October 24, 2018	Muilenburg and Smith	“3Q2018 10-Q”
Form 10-K for the year ended December 31, 2018	February 8, 2019	Muilenburg and Smith	“2018 10-K”
Form 10-Q for the quarter ended March 31, 2019	April 24, 2019	Muilenburg and Smith	“1Q2019 10-Q”
Form 10-Q for the quarter ended June 30, 2019	July 24, 2019	Muilenburg and Smith	“2Q2019 10-Q”
Form 10-Q for the quarter ended September 30, 2019	October 23, 2019	Muilenburg and Smith	“3Q2019 10-Q”

61. Public companies like Boeing are required to maintain effective disclosure controls and procedures to ensure compliance with their SEC reporting obligations. Members of the company’s executive team must be involved in creating and designing these controls, and must personally guarantee their effectiveness.

62. The Committee of Sponsoring Organizations of the Treadway Commission’s Internal Control – Integrated Framework defines an internal control as “a process, effected by an entity’s board of directors, management, and other personnel, designed to provide reasonable assurance regarding the achievement of objectives relating to operations, reporting and

compliance.” With respect to the reporting and compliance aspects of this definition, the Integrated Framework specifically states that “[w]hen internal control is determined to be effective, senior management and the board of directors have reasonable assurance [that] . . . the organization prepares reports in conformity with applicable laws, rules and regulations, and standards established by legislators, regulators, and standard setters, . . . [and that] the organization complies with applicable laws, rules and regulations.” *See* The Committee of Sponsoring Organizations of the Treadway Commission’s Internal Control – Integrated Framework § 3 (“Requirements for Effective Internal Control”).

63. Section 404 of the Sarbanes-Oxley Act of 2002 (“SOX”) requires public companies to publish information in their annual and quarterly reports concerning the scope and adequacy of their internal control structure, and also to assess the effectiveness of such internal disclosure controls and procedures.

64. Section 302 of SOX requires a public company’s CEO and CFO to provide certifications concerning their review of, and disclosure of information about, the company’s internal controls. Specifically, pursuant to rules promulgated by the SEC to implement Section 302 of SOX, the CEO and CFO are required to certify in each periodic report that:

- he or she has reviewed the report;
- based on his or her knowledge, the report does not contain any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by the report;
- he or she and the other certifying officers:
  - are responsible for establishing and maintaining “disclosure controls and procedures” [i.e., controls and other procedures of an issuer that are designed to ensure that information required to be disclosed by the issuer in the reports filed or submitted by it under the Exchange Act is recorded,

- processed, summarized and reported, within the time periods specified in the SEC's rules and forms] for the issuer;
- have designed such disclosure controls and procedures to ensure that material information is made known to them, particularly during the period in which the periodic report is being prepared;
  - have evaluated the effectiveness of the issuer's disclosure controls and procedures as of a date within 90 days prior to the filing date of the report; and
  - have presented in the report their conclusions about the effectiveness of the disclosure controls and procedures based on the required evaluation as of that date;
  - he or she and the other certifying officers have disclosed to the issuer's auditors and to the audit committee of the board of directors (or persons fulfilling the equivalent function):
    - any fraud, whether or not material, that involves management or other employees who have a significant role in the issuer's internal controls; and
    - he or she and the other certifying officers have indicated in the report whether or not there were significant changes in internal controls or in other factors that could significantly affect internal controls subsequent to the date of their evaluation, including any corrective actions with regard to significant deficiencies and material weaknesses.

*Certification of Disclosure in Companies' Quarterly and Annual Reports*, Exchange Act Release 46427, § II.A (Sept. 9, 2002) (footnotes omitted).

65. Defendants Muilenburg and Smith provided these disclosure control certifications with Boeing's 2Q2017 10-Q, 3Q2017 10-Q, 2017 10-K, 1Q2018 10-Q, 2Q2018 10-Q, 3Q2018 10-Q, 2018 10-K, 1Q2019 10-Q, 2Q2019 10-Q, and 3Q2019 10-Q.

#### **IV. The 737 MAX**

66. The Boeing 737 debuted in 1967 and is one of the Company's best-selling airplane models. There are three main categories of 737 airplanes: the 737 Classic, the 737 Next Generation ("737 NG"), and the 737 MAX.

67. The 737 is an integral part of Boeing’s business. By 2010, more than 50% of Boeing’s revenues and more than 60% of its earnings from operations were attributable to its BCA segment, of which the 737 was the driving force. More than 80% of the commercial airplanes Boeing delivered that year were 737s, and nearly 85% of Boeing’s outstanding orders were for 737s. In response to the overwhelming demand for 737s, Boeing ramped up its monthly production from 31.5 airplanes per month in 2009 to a goal of 38 airplanes per month in 2013.

68. In December 2010, however, Boeing’s chief competitor, Airbus, announced a new, more fuel-efficient airplane, the A320neo. The neo was a “new engine option” that promised up to 15% greater fuel efficiency over previous airplanes. This translated into significant cost savings for airlines and passengers and created a competitive advantage for Airbus.

69. At first, Boeing downplayed the competitive threat posed by the A320neo. BCA’s CEO, James Albaugh, told *The New York Times* that Boeing “was likely to hold off on an engine change and instead focus on having a new plane by 2020.” Albaugh also played down the suggestion that airlines wanted a more fuel-efficient plane before then.

70. At a January 14, 2011 BCA meeting, Albaugh similarly told employees that he did not think Boeing was going to re-engine 737 to compete with the A320neo and that it was “really hard to come up with a compelling business case” to do so. He added, “[e]very customer I talk to has a real hard time understanding why a re-engined airplane makes sense.” Albaugh reiterated Boeing’s plan to develop an entirely new airplane to replace the 737 NG.

71. Boeing said the same thing to investors. On February 10, 2011, Boeing’s then-CEO, W. James McNerney, told investors at the 32nd Annual Cowen Aerospace and Defense Conference that “we’re gonna do a new airplane. We’re not done evaluating this whole situation yet, but our current bias is to not re-engine, is to move to an all-new airplane at the end of the

decade, or the beginning of the next decade. It's our judgment that our customers will wait for us."

72. Then, in the spring of 2011, American Airlines' CEO, Gerard Arpey, called McNerney. Arpey told McNerney that, after more than a decade of exclusively buying Boeing airplanes, American Airlines was about to purchase hundreds of A320 airplanes from Airbus. According to Arpey, if Boeing wanted to keep American Airlines' business, it would have to be aggressive and offer an airplane to compete with the A320neo.

73. Boeing immediately scrapped its plans to develop an entirely new airplane – which would take a decade to do – in favor of remodeling the 737 NG. Because Boeing would not have to start from scratch, remodeling the 737 NG would save significant time, resources, and money, and allow it to catch up to Airbus quicker. The remodeled airplane was dubbed the "737 MAX."

74. American Airlines lived up to its word and, on July 20, 2011, announced that it had pledged to purchase more than one hundred 737 MAX airplanes. American Airlines said that it was "pleased to be the first airline to commit to Boeing's new 737 family offering, which [was] expected to provide a new level of economic efficiency and operational performance . . ."

75. A month later, on August 30, 2011, Boeing formally announced the 737 MAX. Boeing touted the "737 MAX [as] offer[ing] airlines the right solution and the best choice for creating the most successful future with improved profitability" and "deliver[ing] maximum efficiency, maximum reliability and . . . maximum passenger comfort."

76. Boeing also announced that it had already received order commitments for nearly five hundred 737 MAX airplanes from five different airlines. "The Boeing 737 is the world's most popular and reliable commercial jet transport, with more than 9,000 orders to date. Boeing

forecasts global demand for more than 23,000 airplanes in the 737’s market segment over the next 20 years at a value of nearly \$2 trillion.”

77. Before any United States-based airline could operate a 737 MAX, however, the FAA had to evaluate and approve it for commercial use. This involved two distinct determinations: (1) whether the airplane met United States federal airworthiness standards; and (2) what minimum level of training would be required for a pilot to fly the airplane for a United States-based airline.

78. The FAA’s Aircraft Evaluation Group (“AEG”) is primarily responsible for determining the minimum level of training required for a pilot to fly a new commercial airplane for a United States-based airline. To do so, the AEG compares the new version of the airplane to a similar, older version of the airplane. After evaluating the differences between the two airplanes, the AEG mandates a minimum level of pilot training, known as “differences training” for pilots operating the new airplane.

79. The levels of differences training range from Level A, the least intensive, through Level E, the most intensive. Level D differences training, for example, requires a full-flight simulator, while Level B differences training can be completed virtually on a computer or tablet. Level D differences training is therefore significantly more expensive to airlines than Level B training because it requires pilots to complete the training in-person at the airline’s full-flight simulator. It is also more expensive because airlines lose the revenue that their pilots would otherwise generate from flying passengers during the time it takes them to complete the extensive simulator training.

80. Level D differences training for the 737 MAX would have been prohibitively expensive and time-consuming for airlines, and, by extension, Boeing. As of January 2020, there were only 34 full-motion 737 MAX simulators worldwide, and only a handful in the United States.

At that time, Southwest Airlines (“Southwest”) had only three 737 MAX simulators, but nearly 10,000 pilots. American Airlines had only one 737 MAX simulator for its 4,200 737 pilots. It would have taken years for these pilots to complete Level D differences training, cost the airlines millions of dollars in revenue, and significantly delayed the airlines’ ability to get their 737 MAX airplanes into service.

81. Thus, according to Michael Teal, Boeing’s former Vice President and Chief Project Engineer for the 737 MAX Program – but unbeknownst to the investing public at the time – obtaining Level B differences training or lower was one of the 737 MAX’s “*design objectives*” and imperative to its financial success. A September 2013 internal presentation prepared by Mark Forkner, Boeing’s 737 Chief Technical Pilot, likewise listed “Flight Crew *Difference training level no greater than level B*” as one of the “*Ground Rules*” for the 737 MAX.

82. Even though the AEG would not issue a final report specifying what level of differences training would be required until 2017, Boeing immediately began marketing the 737 MAX as only requiring minimal, non-simulator-based training for pilots who were certified to operate the 737 NG.

83. In a March 4, 2014 presentation to Ethiopian Airlines, for example, Boeing represented that pilots could fly the 737 NG and 737 MAX “interchangeably” with “Level B Training Only” and “No Flight Simulator required”:

**737 MAX pilot commonality with 737NG**  
One pilot can fly the 737NG or MAX interchangeably



B-737 pilot

Pilot training will be "Differences" NG to MAX  
Limited to "Level B Training" only  
• Computer Based Training (CBT) and other visual Media  
• No Flight Simulator required  
2 days or less for flight crew\*

\*Pending 737 MAX certification  
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84. Likewise, in a July 11, 2014 press release, Boeing boldly represented to its customers and the investing public that “[p]ilots already certified on the [737 NG] will not require a simulator course to transition to the 737 MAX.” This pronouncement was made more than two years before the AEG issued its provisional report on differences training for the 737 MAX and three years before the AEG’s final report.

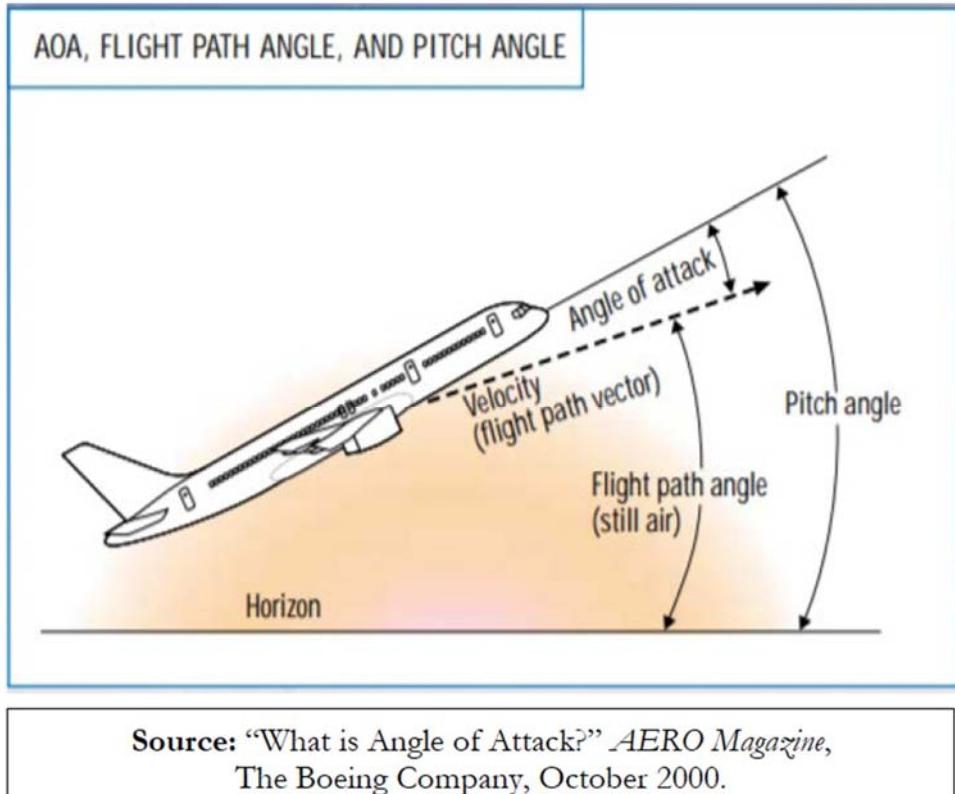
85. Even more significantly, in its contract with Southwest, Boeing agreed to pay \$1 million per airplane if Southwest’s pilots were unable to operate the 737 NG and 737 MAX “interchangeably” “due to any reason.” Boeing also agreed to reimburse Southwest for any training expenses if the AEG required more than 10 hours of training and/or required simulator training. In October 2019, Southwest had 34 737 MAX airplanes in its fleet, firm orders for 246 more, and the option to purchase an additional 115. Thus, if the AEG had required Level D differences training, Boeing would have been required to pay Southwest nearly \$400 million.

**V. The 737 MAX's Maneuvering Characteristics Augmentation System (“MCAS”)**

86. The biggest threat to Level B differences training for the 737 MAX was the addition of an entirely new system to the airplane by Boeing, the Maneuvering Characteristics Augmentation System (“MCAS”).

87. MCAS was added to account for the differences in the aerodynamics between the 737 NG and the 737 MAX. To make the 737 MAX more fuel efficient – like Airbus’s 320neo – Boeing added larger engines to the airplane. The engines on Boeing 737s sit below the airplane’s wings, so the new, larger engines had to be mounted further forward and higher up on the 737 MAX’s wings in order to maintain sufficient ground clearance. The airplane’s nose gear was also extended by about 8 inches to prevent the larger engines from dragging on the ground.

88. These changes, among others, altered the 737 MAX’s aerodynamics during certain flight maneuvers, especially during high angles of attack (“AOA”). AOA is the angle between the oncoming air or relative wind and a reference line on the airplane or wing. Each 737 MAX had two sensors, one on each side of the front of the airplane, which measured the airplane’s AOA.

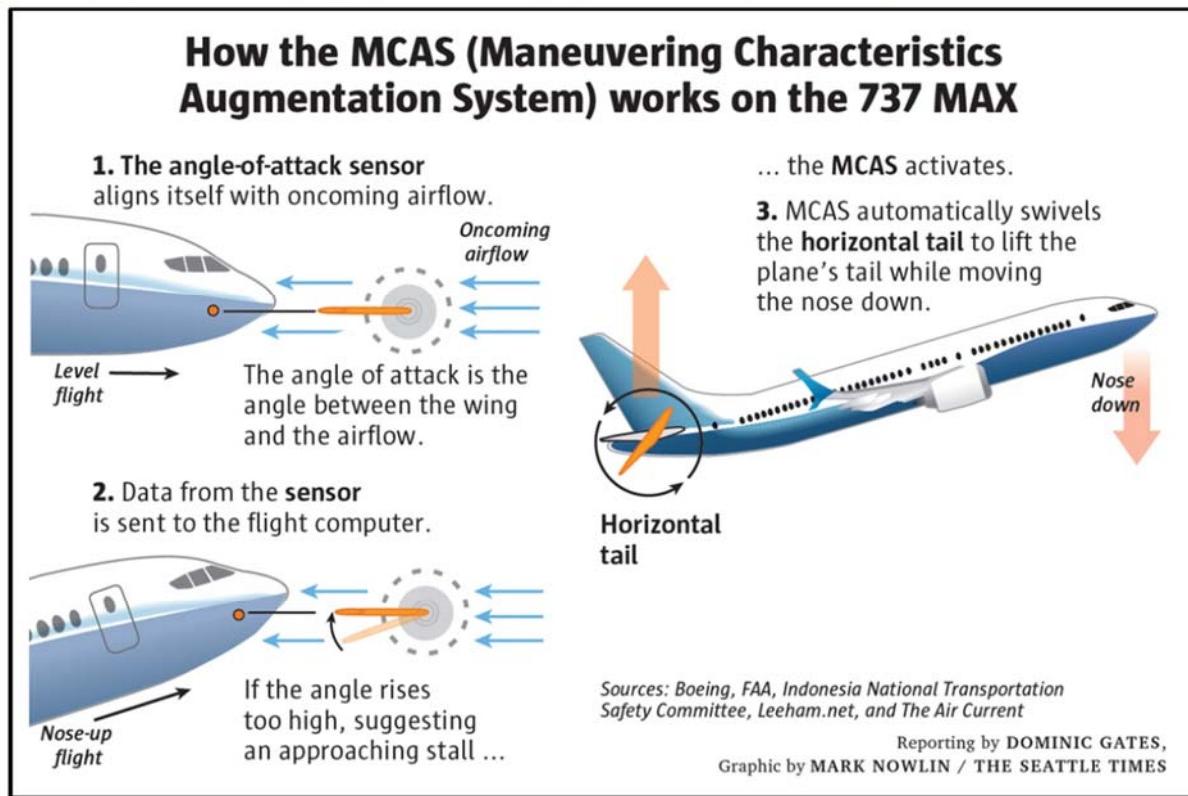


89. When the 737 MAX was pitched up at a high AOA and pilots applied engine thrust, the thrust caused the airplane to pitch up even more, creating a risk that it could enter an aerodynamic stall. An aerodynamic stall is the loss of lift under the airplane's wings that causes the airplane to fall out of the sky absent corrective action by pilots.

90. In addition, when the 737 MAX was maneuvered through a high-speed wind-up turn – which involves flying the airplane at a high AOA – pilots reported feeling a slackening of resistance in the airplane's central control column.

91. Rather than address these concerns through structural changes to the 737 MAX – which would have been time consuming, expensive, and jeopardized Boeing's efforts to certify the airplane as a remodeled version of the 737 NG – Boeing added MCAS to the 737 MAX's flight control software.

92. MCAS is an automated system that was designed to activate if the 737 MAX reached, among other things, a high AOA. MCAS relied on data from the 737 MAX's AOA sensors. If AOA sensors indicated a high AOA, MCAS would automatically move the airplane's horizontal stabilizer to push the airplane's nose downward to reduce the AOA.



Source: Dominic Gates and Mike Baker, "The inside story of MCAS: How Boeing's 737 MAX system gained power and lost safeguards," *The Seattle Times*, June 22, 2019 (Updated: June 24, 2019).

93. Prior to the 737 MAX, MCAS had been used on only one other Boeing airplane, the KC-46 Pegasus, a specialized military refueling tanker primarily used by the United States Air Force. On the KC-46 Pegasus, MCAS relied on data from both of the airplane's AOA sensors and could move the airplane's horizontal stabilizer only once per activation. MCAS was also given limited power to push the KC-46 Pegasus's nose downwards, which made it easier for the pilots to counteract MCAS if necessary. To deactivate MCAS, all the pilots needed to do was pull back

on the airplane’s stick, not perform a more complicated and time-consuming runaway stabilizer trim procedure.

94. Since MCAS was an entirely new system added to the 737 MAX, it should have been disclosed as such to the FAA. It was not, and Boeing went to great lengths to downplay and deflect attention away from MCAS so as to not jeopardize the Level B differences training that it had long since promised customers and investors.

95. As early as May 2013, Boeing identified MCAS as a “significant risk issue” for the 737 MAX. In a May 4, 2013 email to the senior chiefs and functional leaders of the 737 MAX Program, Teal explained:

Differences Pilot Training: ***Ensuring that the level of change on the MAX keeps the Differences training to 16 hours or less of Level B training.*** Concerns include the impact of the resolution of 25.1322 trade ***and the Autopilot roll saturation change driven by the addition of MCAS to the flight controls system.***

96. A few weeks later, Boeing met to address the “problem” with highlighting MCAS to regulators. As documented in Boeing’s internal item tracking compliance system database (“ITRACS”), the “Problem” for Boeing was that “[e]very new buzzword represents a company and airline cost via changed manuals, changed training, changed maintenance manuals.” The “Recommended Action” was to “[i]nvestigate deletion of MCAS nomenclature and cover under the umbrella of ‘revised speed trim’”:

[ITRACS Main Menu] [ViewVerbose] [View Threaded] [View Compressed] [View Summary] [View Alt Format] [Set Flag] [Action Request]

6-FEB-2020 14:33:39

37MAXFCI-PDR AI22

Item Header:

Title: MCAS/Speed Trim  
 Primary Resp Person: [REDACTED]  
 Secondary Resp Person: [REDACTED]

Fix Need Date: 01-JUL-2013

ECD:

Phase: CLOSED Item is resolved, no further action required  
 Model: 737 MAX -8

Information Last Modified: 27-JUN-2013 10:46:49 US(Pacific)

Item Progress:

Date	Resp Person	Type	Attachments	Last Updt (USPac)
21-MAY-2013	[REDACTED]	ORIG	N	24-MAY-2013 08:38:21

Problem Statement: Every new buzzword represents a company and airline cost via changed manuals, changed training, changed maintenance manuals.

Recommended Action: Investigate deletion of MCAS nomenclature and cover under the umbrella of 'revised speed trim'.

07-JUN-2013 [REDACTED] ANALYSIS N 07-JUN-2013 08:29:23

6/7/13 Meeting Minutes:

- 1) GTTA left the name as MCAS but treated as analogous function as a speed trim type function.
- 2) If we emphasize MCAS is a new function there may be a greater certification and training impact.
- 3) Treat as an addition to Speed Trim.
- 4) Externally we would communicate it is an addition to Speed Trim.
- 5) Internally continue using the acronym MCAS (within variable names etc).
- 6) Work with AR on certification perspective to ensure this strategy is acceptable.
- 7) Make sure EASA Fam Tech presentation is consistent with intent that MCAS is an addition to Speed Trim.

07-JUN-2013 [REDACTED] PROP\_RES N 21-JUN-2013 09:25:42

After speaking with the Autoflight AR, concurrence was provided that we can continue to use the MCAS nomenclature internally (variable names, etc) while still considering MCAS to be an addition to the Speed Trim function. This will allow us to maintain the MCAS nomenclature while not driving additional work due to training impacts and maintenance manuals.

27-JUN-2013 [REDACTED] PROP\_RES N 27-JUN-2013 10:37:24

Accepting team analysis on keeping MCAS nomenclature. Item can be closed.

27-JUN-2013 [REDACTED] CLOSURE N 27-JUN-2013 10:46:49

Action Item is complete and is closed.

97. Boeing noted that “if we emphasize MCAS is a new function there may be greater certification and training impact.” To avoid this, the Company decided that MCAS would be “[t]reat[ed] as an addition to Speed Trim.” “Externally we would communicate it as an addition to Speed Trim. . . Internally continue using the acronym MCAS . . .”

98. Boeing ran this strategy by one of its Authorized Representatives (“AR”) – a Company employee who was authorized to conduct certification work on behalf of the FAA – who concurred with its decision to “continue to use the MCAS nomenclature internally” “while still considering MCAS to be an addition to the Speed Trim Function.” Boeing noted that “[t]his will allow us to maintain MCAS nomenclatu[r]e while not driving additional work due to training impacts and maintenance manual expansions.”

99. Boeing made the decision to forego extensive simulator-based training for its pilots and a more detailed flight manual explaining MCAS even though it knew that it took one of its pilots more than ten seconds to respond to MCAS during a test flight, a situation the pilot deemed “catastrophic.”

100. More than six months earlier, on November 1, 2012, a Boeing engineer in the 737 MAX Aerodynamic Stability & Control group emailed his colleagues regarding MCAS activation during a recent simulator training as part of MCAS’s Functional Hazard Assessment. The engineer relayed that one test pilot, with the assistance of “teamwork,” was able to recognize MCAS and respond to it in approximately four seconds. Another test pilot, however, took more than ten seconds to respond and deemed the condition “catastrophic.” In light of the test pilots’ reaction times, the engineer asked:

Do you think that with pilot training/knowledge of the [MCAS] system there will be a sufficiently quick response to the stab runaway during the windup turn/recovery and that it is appropriate to deem it hazardous and have the MCAS system designed to meet

this? *Or should we step up to catastrophic with the assumption that not all pilots will recognize it quickly enough?*

101. The engineer’s concerns were prophetic. In both of the tragic crashes later caused by MCAS, the pilots were unable to identify and combat MCAS quickly enough. At the time of test piloting however, Boeing simply recorded the test pilot’s reaction time in its internal MCAS “Coordination Sheets” without further inquiry.

102. Between 2015 and 2018, Boeing issued at least six separate MCAS Coordination Sheets referencing the “catastrophic consequences” of a greater than ten second pilot reaction time:

Stabilizer runaways to pilot reaction (item D) were performed. . . . With pilot training to recognize the runaway and use of teamwork, the failure was found Hazardous, which is the same as the item C finding. *A slow reaction time scenario (>10 seconds) found the failure to be catastrophic due to the inability to arrest the airplane overspeed.*

103. At least four different Boeing ARs reviewed and approved the Coordination Sheets – in addition to the numerous other Boeing employees who prepared or were copied on the Coordination Sheets – yet no one at Boeing informed the FAA or any of the Company’s customers or investors that it had taken one of Boeing’s test pilots more than ten seconds to recognize and respond to MCAS activation and the resulting “catastrophic consequences.”

## **VI. Boeing Disregards that MCAS Is Susceptible to a “Single Point of Failure” and Conceals that its Fail-Safe Is Inoperable on 80% of Airplanes**

104. MCAS on the 737 MAX was originally designed to operate like MCAS on the KC-46 Pegasus. MCAS was designed to only activate in very limited circumstances: when the airplane was *both* traveling at a high speed (above a certain Mach) and in danger of stalling (at a high AOA). If MCAS did activate, it could only move the airplane’s horizontal stabilizer a maximum of 0.6 degrees.

105. Unlike the KC-46 Pegasus, however, Boeing designed the 737 MAX to rely on data from ***only one of the airplane's two AOA sensors***. MCAS alternated which AOA sensor it relied on each flight, from the left AOA sensor to the right AOA sensor and vice versa. This meant that, if the AOA sensor on which MCAS was relying on malfunctioned and erroneously indicated a high AOA, MCAS would repeatedly activate and push the airplane's nose down unless the pilots could quickly identify and repeatedly deactivate it.

106. Boeing's decision to condition MCAS on data from only one of the 737 MAX's AOA sensors – making it susceptible to a “single point of failure” – was contrary to industry norms, federal regulations, and the Company's own historical practices. It was also questioned internally by Boeing's own engineers and has been widely criticized in the aftermath of the crashes caused by MCAS.

107. Although not publicly known at the time, experts who have examined Boeing's use of MCAS after the fatal crashes have expressed their shock at what Boeing did. As reported by *The Wall Street Journal*, “[s]afety experts, pilots and some former Boeing engineers say it is rare for aircraft to rely on just one sensor for almost any system whose failure could cause a crash.” Peter Seiler, a professor at the University of Minnesota who previously worked on the flight-control electronics for the Boeing 787 aircraft said, “it would be highly unusual to have a safety-critical system dependent on a single sensor.”

108. According to *The New York Times*, many current and former employees “said that after the first crash, they were ***stunned*** to discover MCAS relied on a single sensor.” “***That's nuts***,” said an engineer who helped design MCAS. “***I'm shocked***,” said a safety analyst who scrutinized it.

109. *The Seattle Times* similarly reported that “some of the people who have worked on Boeing’s new 737 MAX airplane were **baffled** to learn that the company had designed an automated safety system that abandoned the principles of component redundancy, ultimately entrusting the automatic decision-making to just one sensor – a type of sensor that was known to fail.” “A single point of failure is an absolute no-no,” said one former Boeing engineer who worked on the 737 MAX.

110. Indeed, because the AOA sensors are mounted on the airplane’s fuselage near the nose, they are particularly susceptible to damage from jetways, ground equipment, and birds. Since the early 1990s, there have been more than 140 reported instances of AOA sensors being damaged or malfunctioning, at least 25 in which the damage triggered cockpit alerts or emergencies. For this reason, Airbus installed three AOA sensors on the A320neo.

111. Several Boeing engineers questioned MCAS’s reliance on a single AOA sensor and suggested installing a backup system that could detect if one of the AOA sensors was malfunctioning. In a December 17, 2015 e-mail, an engineer asked, “[a]re we vulnerable to single AOA sensor failures with the MCAS implementation or is there some checking that occurs?”

112. In 2014, Curtis Ewbank – a Boeing engineer who later filed a scathing internal ethics complaint against Boeing – recommended that the Company install a “synthetic airspeed” system on the 737 MAX. As reported by *The Seattle Times*, the synthetic airspeed system would have detected the false AOA signal that activated MCAS during both the fatal crashes. “Managers twice rejected adding the new system on the basis of ‘cost and potential (pilot) training impact,’ according to Ewbank’s ethics complaint. “It was then raised a third time in a meeting with 737 MAX chief project engineer, Michael Teal, who cited the same objections as he killed the proposal.”

113. Instead of making MCAS reliant on data from both AOA sensors or adding a synthetic airspeed system, Boeing relied on the 737 MAX’s “AOA Disagree Alert” to safeguard against faulty readings from the AOA sensors. Starting in 2006, the AOA Disagree Alert became a standard feature on the 737 NG and subsequently on the 737 MAX.

114. The AOA Disagree Alert was a standard, non-optional feature on the 737 MAX and would display the message “AOA DISAGREE” on the airplane’s flight display if the AOA sensors malfunctioned and disagreed by more than 10 degrees for more than 10 continuous seconds.

115. In addition to the standardized AOA Disagree Alert, Boeing offered customers the option to purchase an additional “AOA Indicator.” The AOA Indicator was a dial in the upper right-hand corner of the flight display that showed the airplane’s raw angle of attack data. It offered a visual indication of the amount of lift the airplane’s wings were generating, thereby helping the flight crew avoid a high AOA and, ultimately, a stall. Prior to the Lion Air crash, less than 20% of 737 MAX airplanes had the optional AOA Indicator installed.

116. Boeing used a supplier, Rockwell Collins, now known as Collins Aerospace Systems, to code the software for the AOA Disagree Alert. In essence, the software was responsible for taking the inputs provided by the two AOA sensors and computing the AOA indication. However, due to a miscommunication between Boeing and Rockwell Collins, the software required that the AOA Indicator was displayed before displaying an AOA Disagree Alert. This effectively tied the display of the standardized, non-optional AOA Disagree Alert back to the display of the optional AOA Indicator. *This meant that the AOA Disagree Alert, although installed on every 737 MAX, would only function on airplanes that were also equipped with the optional AOA Indicator.*

117. In August 2017, three months after airlines had begun flying the 737 MAX, Boeing discovered that the AOA Disagree Alert was only functioning on the 20% of airplanes whose owners had also purchased the optional AOA Indicator. As described in the House Committee Report:

*Instead of promptly reporting its knowledge of this inoperable alert to the FAA, and telling affected customers and pilots, Boeing chose to postpone the fix for the defect until 2020, nearly three years later. In essence, by its actions, Boeing chose to conceal this fact from the FAA, affected customers, and MAX pilots. Most astoundingly, Boeing continued to manufacture and deliver scores of MAX aircraft with non-functioning AOA Disagree alerts, without informing the FAA, airlines, or pilots about the fact that the alert, though described in technical materials provided to airlines, was not functioning on those airplanes.*

118. During the House of Representatives' Committee on Transportation and Infrastructure's October 30, 2019 hearing on the 737 MAX, Representative DeFazio called Boeing's decision to conceal the inoperable AOA Disagree Alert from regulators, its customers and investors, and the flying public "inexplicable":

Boeing learned that the AOA, angle-of-attack, disagree light, which was a standard feature on all Boeing 737s, did not work on this plane, unless someone bought the upgraded package. . . . But Boeing decided to delay the fix for 3 years, until 2020. They didn't tell the FAA, they didn't tell the customers, and they didn't tell the pilots about this until after the Lion Air crash. *That is inexplicable.*

119. In an April 29, 2019 statement, Southwest confirmed that, when Boeing delivered its 737 MAX airplanes to Southwest, it depicted the AOA Disagree Alert as operable regardless of whether the optional AOA Indicator had also been purchased:

*Upon delivery (prior to the Lion Air event), the AOA Disagree lights were depicted to us by Boeing as operable on all MAX aircraft, regardless of the selection of optional AOA Indicators on the Primary Flight Display (PFD). The manual documentation presented by Boeing at Southwest's MAX entry into service indicated the AOA Disagree Light functioned on the aircraft, similar to the Lights on our NG series. After the Lion Air event, Boeing*

*notified us that the AOA Disagree Lights were inoperable without the optional AOA Indicators on the MAX aircraft.* At that time, Southwest installed the AOA Indicators on the PFD, resulting in the activation of the AOA Disagree lights . . . .

120. Even more shockingly, during a November 27, 2018 private meeting between Boeing executives and American Airlines pilots, Boeing's Vice President, Michel Sinnett, admitted that a functioning AOA Disagree Alert would have prevented the Lion Air crash. As reported by *The Wall Street Journal*, Sinnett told the pilots that "*[t]his wouldn't have happened to you guys*" because American Airlines had purchased the optional AOA Indicator on the 737 MAX.

**VII. Boeing Fails to Inform the FAA that it Made Fundamental and Deadly Changes to MCAS**

121. Because the 737 MAX was a remodeled version of the 737 NG, Boeing was able to escape increased regulatory scrutiny by applying for an "amended type" certificate. Applicants for amended type certificates for airplanes "derivative" of a previously certified airplane – like the 737 MAX – must show that any changes, and all areas affected by those changes, comply with all applicable FAA airworthiness requirements. Unchanged areas, however, are not required to comply with airworthiness requirements that may have been altered or updated since the original plane was certified. As explained in the House Committee Report, the 737 MAX "was not required to meet many of the safety regulations that had emerged since the plane's original certification back in 1967 and therefore avoided installing some modern safety features on the airplane, such as various crew alerting systems."

122. As part of the certification process, Boeing was required to perform a "Functional Hazard Assessment" of MCAS. A Functional Hazard Assessment is a "systematic comprehensive examination of an airplane and system functions to identify potential minor, major, hazardous, and catastrophic failure conditions that may arise as a result of a malfunction or a failure to function."

123. A “minor” failure is one that does not “significantly reduce airplane safety and involve crew actions that are within their capabilities.” A “major” failure is one that “would reduce the capability of an airline or the ability of the crew to cope with adverse operating conditions to the extent there would be a significant reduction in safety margins or functional capabilities.” In addition, a major failure could involve “physical distress to passengers or cabin crew, possibly including injuries.” A “hazardous” failure is one that “would reduce the capability of an airplane or the ability of the crew to cope with adverse operating conditions” to the extent that there could be “[s]erious or fatal injury to an occupant other than the flight crew.” Finally, a “catastrophic” failure is one that is “expected to result in multiple fatalities of the occupants, or incapacitation or fatal injury to a flight crewmember normally with the loss of the airplane.” According to federal regulations, “[n]o catastrophic failure conditions . . . should result from the failure of a single component, part, or element of a system.”

124. Incredibly, Boeing did not classify an MCAS malfunction as “catastrophic,” even though it knew, as discussed above, that *during the Functional Hazard Assessment*, it had taken one of its test pilots more than 10 seconds to combat MCAS, a situation Boeing itself described as “catastrophic.” Instead, Boeing classified an MCAS malfunction as “hazardous,” provided there was “*pilot training to recognize the runway and use of teamwork . . .*” Under these narrow circumstances, a “typical reaction time was observed to be approximately 4 seconds.”

125. The assumptions on which Boeing based its four second reaction time estimate were completely unmoored from reality. First, Boeing did not even tell pilots about MCAS or include any reference to it in the airplane’s flight manual, *let alone provide pilots with “adequate training” such that they could identify and disable a system in four seconds that they did not know existed.* Second, MCAS could not be disabled in the same way that the automatic flight

systems on all other airplanes could be disabled – by simply pulling back on the airplane’s column. Instead, pilots would have to execute a series of complicated maneuvers, which were not disclosed in the flight manual, and operate the airplane’s trim wheel manually with huge amounts of physical force. Third, Boeing ignored the impact that a cacophony of flight deck alerts would have on pilots’ ability to identify and disable a system that they did not know existed. Indeed, the National Transportation Safety Board (“NTSB”) concluded that “the assumptions that Boeing used in its functional hazard assessment of uncommanded MCAS function for the 737 MAX ***did not adequately consider and account for the impact that multiple flight deck alerts and indications could have on pilots’ responses to the hazard.***”

126. Boeing also represented in its Functional Hazard Assessment of MCAS submitted to the FAA that MCAS was designed to operate only during high-speed wind-up turns, including only at speeds of Mach 0.7-0.8. In June 2015, Chief Technical Pilot Forkner attended a 737 MAX briefing during which Boeing employees reiterated to the FAA AEG that MCAS was designed to operate only during high-speed wind-up turns, and only at speeds of Mach 0.7-0.8. After the briefing, Forkner and Patrik Gustavsson, a 737 MAX Technical Pilot, discussed MCAS with an FAA AEG employee and made the same representations about its limited scope.

127. Boeing began its first test flights of the 737 MAX in January 2016 and soon discovered that the airplane was not handling well when nearing stalls at lower speeds. To fix this problem, Boeing undertook a massive overhaul of MCAS that allowed it to activate at lower speeds and gave it the ability to move the airplane’s horizontal stabilizer a maximum of 2.5 degrees (as opposed to the 0.6 degrees as originally designed).

128. Boeing’s executives were made aware of the changes to MCAS on March 30, 2016, when Boeing held a “737 MAX Leadership Review” and Boeing engineers gave a presentation to

senior management on the 737 MAX Program regarding the proposed redesign of MCAS. Boeing approved the changes to, and expansion of, MCAS, but did not disclose these changes to the FAA AEG even though they fundamentally altered MCAS's operation and the circumstances under which it would activate.

129. That same day, Forkner e-mailed the FAA AEG requesting its approval to remove all references to MCAS from the 737 MAX's Flight Crew Operations Manual ("FCOM") because it was "*completely transparent to the flight crew and only operates WAY outside of the normal operating envelope.*" Ignorant of the changes to MCAS, the FAA AEG approved Boeing's request.

130. A few months later, on August 16, 2016, Forkner was informed that the FAA AEG – still under the impression that MCAS was only designed to operate during high-speed wind-up turns and only at speeds of Mach 0.7-0.8 – had issued a provisional Level B differences training determination for the 737 MAX. Forkner e-mailed 40 Boeing employees announcing the achievement. One of Forkner's colleagues responded to his email: "And, just to confirm, there are absolutely no formal checks? And no functional currency issues between the NG and MAX . . . *you can be away from the NG for 30-years and still be able to jump into a MAX? LOVE IT!*"

131. Forkner later bragged to colleagues that he was able to "*jedi-mind trick*" foreign regulators into accepting the same type of pilot training for the 737 MAX that the FAA AEG had agreed to:

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**From:** Forkner, Mark A [<mailto:mark.a.forkner@boeing.com>]  
**Sent:** Thursday, November 03, 2016 12:16 PM  
**To:** [REDACTED] (FAA)  
**Subject:** RE: Hi there

[REDACTED] Things are calming down a bit for my airplane cert, at least for now. I'm doing a bunch of travelling though the next few months; simulator validations, jedi-mind tricking regulators into accepting the training that I got accepted by FAA etc.  
[REDACTED]

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132. For example, in response to a foreign airline that was considering simulator-based training for its pilots, Forkner wrote, “[t]here is absolutely no reason to require your pilots to require a MAX simulator to begin flying the MAX. Once the engines are started, there is only one difference between NG and MAX procedurally, and that is that there is no OFF position of the gear handle. Boeing does not understand what is to be gained by a 3 hour simulator session, when the procedures are essentially the same.” Forkner wrote in a later email, “[a] simulator training requirement would be quite burdensome to your operation.”

133. Forkner also boasted to one of his colleagues that he made a foreign airline “*feel stupid about trying to require any additional training requirements.*” “*I just jedi mind tricked th[ese] fools,*” Forkner wrote. “*I should be given \$1000 every time I take one of these calls, I save this company a sick amount of \$\$\$\$\$.*”

134. *Forkner even discouraged Lion Air – whose airplane ultimately crashed due to an MCAS malfunction – from requiring simulator-based training.* As Forkner explained to a colleague, “[n]ow friggin Lion Air might need a sim to fly the MAX, and *maybe because of their own stupidity.* I’m scrambling to figure out how to unscrew this now! *Idiots.*”

135. Other Boeing employees were more contrite about concealed safety shortcuts and reckless disregard for human life. One employee wrote in an instant message, “*I still haven’t been forgiven by god for the covering up I did last year.*” Another employee admitted that “*I have used the words ‘misleading’ and ‘mischaracterization’ a lot over the last two years in relation to [t]his [MAX] program.*”

136. In another instant message exchange, a Boeing employee wrote:

Honesty is the only way in this job – integrity when lives are on the line on the aircraft and in training programs shouldn’t be taken with a pinch of salt. *Would you put your family on a MAX simulator trained aircraft? I wouldn’t.*

137. On November 15, 2016, during a simulated test flight of the 737 MAX, Forkner experienced MCAS operating at Mach 0.2 – a significantly lower speed than what he had told the FAA AEG that MCAS could activate in. Later that day, Forkner sent an instant message to Gustavsson describing his experience in the flight simulator:

Forkner: Oh shocker alert! / MCAS is now active down to [Mach] .2 / It's running rampant in the sim on me / at least that's what [a Boeing simulator engineer] things is happening

Gustavsson: Oh great, that means we have to update the speed trim description in vol 2

Forkner: *so I basically lied to the regulators (unknowingly)*

Gustavsson: it wasn't a lie, no one told us that was the case

138. Shortly after Forkner's test flight, he met with an FAA AEG employee who asked about Forkner's experience in the 737 MAX simulator. Forkner did not inform the FAA AEG employee that MCAS could now operate during nearly the entire speed range for the 737 MAX – including at lower altitudes in and around takeoff and landing.

139. On November 17, 2016, Forkner and Gustavsson received a draft of the FAA AEG's Flight Standardization Board ("FSB") Report. A few days later, Forkner e-mailed the FAA AEG proposed edits to the FSB Report and suggested that all references to MCAS be deleted because "*[w]e agreed not to reference MCAS since it's outside [the] normal operating envelope.*" Forkner again failed to inform the FAA AEG about the expanded nature of MCAS.

140. On January 17, 2017, Forkner e-mailed the FAA AEG with additional proposed edits to the FSB Report. Forkner again requested: "*Delete MCAS, recall we decided we weren't going to cover it in the FCOM or the CBT, since it's way outside the normal operating envelope*

...."

141. The FAA AEG agreed to Boeing's request. The final version of the 737 MAX's 1,500-page FCOM contained only a single reference to MCAS, in the index.

142. Of course, the TIAA Plaintiffs and other members of the public were unaware of the safety risks Boeing was ignoring in order to sell the 737 MAX. To the contrary, and as explained herein, Defendants' public statements materially misrepresented the truth about the 737 MAX.

### **VIII. Defendants Misrepresent that the 737 MAX Was Properly Certified and a Reliable Airplane**

143. On February 16, 2018, Boeing reported that the FAA had certified the 737 MAX 9 for commercial flight. Boeing stated that, "*[t]he FAA certification affirms that the airplane's handling, systems and overall performance all comply with required aviation regulations.*" "*Our teams built superior capabilities into the MAX 9 and proved them all the way through flight test,*" said Keith Leverkuhn, Vice President and General Manager of the 737 MAX program. Boeing again reaffirmed that the "*737 MAX family is designed to offer customers exceptional performance*, with lower per-seat costs and an extended range that is opening up new destinations in the single-aisle market. The 737 MAX incorporates the latest CFM International LEAP-1B engines, Advanced Technology winglets, Boeing Sky Interior, large flight deck displays *and other features to deliver the highest efficiency, reliability and passenger comfort in the single-aisle market.*"

144. On March 16, 2018, Boeing announced that the 737 MAX 7 successfully completed its first flight. "*Everything we saw during today's flight shows that the MAX 7 is performing exactly as designed,*" said Leverkuhn. Boeing again represented to the market that the "737 MAX family incorporates the latest CFM International LEAP-1B engines, Advanced Technology

winglets, Boeing Sky Interior, large flight deck displays *and other features to deliver the highest efficiency, reliability and passenger comfort in the single-aisle market.*”

**IX. Boeing Ignores a Whistleblower’s Concerns About the Quality and Safety of the 737 MAX Because it Is a “Profit-Making Organization”**

145. A few months later, in June 2018, Edward Pierson, a Boeing plant supervisor at Boeing’s Renton, Washington facility, began to raise serious concerns with Boeing senior management regarding safety and quality control problems he was witnessing in the production of the 737 MAX.

146. On June 9, 2018, Pierson e-mailed Scott Campbell, the General Manager of the 737 MAX Program and the most senior official at the Renton facility. Pierson shared two safety concerns: “My first concern is that our workforce is exhausted.” “My second concern is schedule pressure (combined with fatigue) is creating a culture where employees are either deliberately or unconsciously circumventing established processes.” Around this time, Boeing was in the process of ramping up its 737 MAX production rate from 47 airplanes per month to 52 airplanes per month. Pierson went on, “*all my internal warning bells are going off. And for the first time in my life, I’m sorry to say that I’m hesitant about putting my family on a Boeing airplane.*”

147. It took five weeks and a second email from Pierson for he and Campbell to meet. During the “tense” meeting, Pierson told Campbell that, in “military operations, if we have these kinds of indications of unstable safety type of things, we would stop.” Campbell responded: “*The military is not a profit-making organization.*”

148. The next day, Pierson wrote to Campbell thanking him for his time and reiterating the concerns that he had about schedule pressure and safety issues. Campbell responded that he was already taking actions to address these issues but did not list any specific measures he was planning to institute in response to Pierson’s concerns. In fact, rather than heed Pierson’s dire

warnings, Boeing continued to ramp up its production of the 737 MAX. *Pierson later testified before the House Committee on Transportation and Infrastructure that “Boeing had misled the public about the state of 737 production:* ‘Record numbers of airplanes delivered make for good headlines, but they can belie the reality of production health.’”

149. Pierson’s concerns were echoed by other Boeing employees at the Renton facility. As reported by *The Seattle Times*, one employee described the Renton facility as “total chaos,” while another said that “his work group have asked their managers about perhaps stopping production lines in order to catch up. . . . *Managers have responded categorically that a pause cannot happen because of the severe impact it would have on suppliers, on airline customers and on the company’s stock price.*”

150. On August 1, 2018, Pierson voluntarily retired early from Boeing after a decade with the Company. Pierson did so because he believed Boeing was more focused on the quantity of airplanes being produced rather than correcting the quality control and safety concerns that he had identified.

## **X. Lion Air Flight 610 Crashes, Killing All 189 People Onboard**

151. On October 29, 2018, Lion Air flight 610 departed Jakarta, Indonesia for Pangkal Pinang, Indonesia. Two minutes into the flight, MCAS – relying on erroneous data from the single functioning AOA sensor – took control of the airplane. MCAS believed the airplane’s nose was too high, so it moved the horizontal stabilizer upwards and the nose downwards to avoid a stall. The Lion Air flight crew radioed air traffic control to report flight control problems and were authorized to return to Jakarta for an emergency landing, but the airplane never made it back.

152. Over the next ten minutes, MCAS took over the airplane more than *20 times*, forcing the nose downwards into a steep dive each time. Audio recordings from the cockpit reveal alarms blaring as the air traffic controllers issued instructions and the pilot and flight crew

desperately tried to save the airplane and their passengers' lives. One pilot searched through the airplane's flight manual for nearly nine minutes in an effort to locate the source of the problem and a solution. The pilot's search was in vain – Boeing had removed all references to MCAS from the flight manual.

153. The other pilot can be heard praying aloud as he struggled to pull back the airplane's control column. On all other Boeing 737s, pulling back on the control column would have permanently disabled all automated flight control systems. But not on the 737 MAX. As MCAS repeatedly activated and the airplane picked up speed, the control column got heavier. At one point, the pilot was pulling back on the control column with more than 100 pounds of sustained force. It was not enough.

154. Less than 12 minutes after taking off, Lion Air flight 610 crashed into the Java Sea at approximately 500 miles per hour. All 189 people aboard the airplane were killed, along with one rescue diver who was attempting to recover bodies from the Java Sea in the aftermath of the crash.

#### **XI. Boeing Quickly Realizes that MCAS Is to Blame for the Lion Air Crash and that its Design Assumptions are Flawed**

155. The world immediately began searching for answers about what could have caused a brand-new Boeing 737 MAX to plummet into the ocean 12 minutes after takeoff. Although the airplane's "black boxes" had not yet been recovered, the *Associated Press* reported on October 30, 2018, that "flight-tracking sites . . . show erratic speed, altitude and direction in the minutes after the jet took off."

156. According to BCA's Chief Engineer, John Hamilton, who testified before the House of Representatives' Committee on Transportation and Infrastructure on October 30, 2019:

In the hours following the Lion Air accident, we convened a group of experts from around the company and started postulating on what

possibly could have happened, given the limited data that was available. *We quickly identified that this MCAS activation could have been a scenario.* We started running that through our labs, running scenario planning. *And once the flight data recorder came up later in the week, and it verified what we had, we went--started working on a software change immediately to start working that. . .*

..

And [Boeing] separately, convened a safety board and determined that that was not enough, just a software change, to mitigate the risk. *And we determined that, while the crew--the captain of Lion Air was trimming out the airplane as it was getting MCAS when he handed over the control, it didn't quite follow the assumptions that we had based the design on.*

157. The rest of the world was ignorant of MCAS – with Boeing having concealed its existence from regulators, its customers and investors, and the flying public – and demanded answers from Boeing about whether the 737 MAX was safe to fly. On November 6, 2018, for example, *The New York Times* reported that, “[w]hile there have been no indications that the [737 MAX] has a systemic problem with airspeed readings, the model’s newness means any potential problem may not have manifested itself in other carriers’ fleets.”

158. The FAA therefore convened an emergency meeting with Boeing executives to understand MCAS. As reported by *The New York Times*, FAA “officials sat incredulous as Boeing executives explained details about the system that they didn’t know.” In the middle of the meeting, an FAA employee “interrupted to ask a question on the minds of several agency engineers: *Why hadn’t Boeing updated the safety analysis of a system that had become so dangerous?*”

## **XII. Defendants Falsey Blame the Lion Air Pilots for the Crash and Reassure Investors that the 737 MAX Is Safe**

159. To deflect attention away from itself – and despite knowing almost immediately that MCAS was to blame for the Lion Air crash – Boeing pointed the finger at the Lion Air pilots, and falsely reassured investors that the 737 MAX was safe to fly.

160. On November 7, 2018, Boeing issued a press release with preliminary details from the Indonesian National Transportation Safety Committee’s (“Indonesian NTSC”) investigation. The Indonesian NTSC “indicated that Lion Air flight 610 experienced erroneous input from one of its AOA (Angle of Attack) sensors.” As a result, Boeing disclosed that it had released an “Operations Manual Bulletin (OMB) *directing operators to existing flight crew procedures to address circumstances where there is an erroneous input from an AOA sensor.*”

161. The subject matter of the Operations Manual Bulletin (“OMB”) was “Uncommanded Nose Down Stabilizer Trim Due to Erroneous Angle of Attack (AOA) During Manual Flight Only” (the “November 6 Bulletin”) and stated, in relevant part:

#### **Background Information**

The Indonesian National Transportation Safety Committee has indicated that Lion Air flight 610 experienced erroneous AOA data. Boeing would like to call attention to an AOA failure condition that can occur during **manual flight only**. *This bulletin directs flight crews to existing procedures to address this condition.*

In the event of erroneous AOA data, the pitch trim system can trim the stabilizer nose down in increments lasting up to 10 seconds. The nose down stabilizer trim movement can be stopped and reversed with the use of the electric stabilizer trim switches but may restart 5 seconds after the electric stabilizer trim switches are released. Repetitive cycles of Uncommanded nose down stabilizer continue to occur unless the stabilizer trim system is deactivated . . . .

#### **Operating Instructions**

In the event an uncommanded nose down stabilizer trim is experienced on the 737-8/-9, in conjunction with one or more of the above indications or effects, do the Runaway Stabilizer NNC ensuring that the STAB TRIM CUTOUT switches are set to CUTOUT and stay in the CUTOUT position for the remainder of the flight.

162. The November 6 Bulletin did not disclose that Boeing had installed a brand-new “pitch trim system” in the 737 MAX – MCAS – that operated differently than any other trim

system on a 737 airplane. To the contrary, the November 6 Bulletin directed flight crews to “existing procedures to address this condition” – effectively pointing the finger at the Lion Air pilots and blaming them for the crash.

163. Initially, the public was reassured by Boeing’s statements. As Anthony Brickhouse, a professor in Embry-Riddle’s College of Aviation, explained to NPR, “[w]hat [the November 6 Bulletin] is doing is basically putting airlines on notice who are flying the 737 MAX to definitely, you know, *take a little extra caution in reviewing their procedures and following procedures that are already published.*”

### **XIII. Defendants Direct Flight Crews to Utilize “Existing Flight Procedures” and Falsely Reaffirm that the 737 MAX Is Safe**

164. It soon became clear, however, that the pitch trim system referenced in the November 6 Bulletin – which Boeing now disclosed was MCAS – was entirely new to the 737 MAX. As reported by *The Seattle Times*, pilots were outraged by Boeing’s admission. Jon Weakas, President of Southwest’s Airlines Pilots Association, said that pilots were unaware of MCAS until Boeing issued the November 6 Bulletin. “We did not know this was on the [737] MAX models,” Weakas said in an interview. “When you’re responsible for that aircraft and there are systems on there that you have not been made aware of, that’s not right.” Dennis Tager, Communications Chairman for Allied Pilots Association, chastised Boeing for exhibiting a “failure of the safety culture” by not informing pilots about MCAS. “This was clearly a sign that the safety culture [at Boeing] was missing on a cylinder or two,” Tager said. “We’re all on the same side looking at Boeing, saying, ‘What else you got?’”

165. In response to the pilots’ concerns, Boeing issued a statement on November 13, 2018, that it was “deeply saddened” by the Lion Air crash and was working with officials to determine what exactly went wrong. “We are taking every measure to fully understand all aspects

of this incident, working closely with the investigating team and all regulatory authorities involved,” Boeing spokesperson Paul Bergman said. “***We are confident in the safety of the 737 MAX. Safety remains our top priority and is a core value for everyone at Boeing.***”

166. That same day, Defendant Muilenburg sat down for an interview with Fox News. During the interview, Defendant Muilenburg falsely stated:

The bottom line here is ***the 737 MAX is safe and safety is a core value*** for us at Boeing and it always has been and we ensure that our airplanes are safe . . . .

[T]here were some indications of an inaccurate angle of attack signal that was being sent to the airplane and of course our airplane has the ability to handle that ***with procedures in place*** and we’ve already issued a couple of additional bulletins to our operators and pilots around the world that point them back to ***existing flight procedures to handle that kind of condition***. . . .

Again, we ensure that ***we provide all of the information that is needed to safely fly our airplanes*** . . . .

***[T]he bottom line here is that the 737 MAX is a very safe airplane and we’re very confident in that.***

167. Defendant Muilenburg also misrepresented that it was pilot error – not MCAS – that caused the Lion Air crash. In response to a question about whether the Lion Air crash was the result of “a new system that wasn’t disclosed to pilots,” Defendant Muilenburg unequivocally stated:

***No.*** There are new systems on the airplane that are designed to take advantage of the capabilities of the airplane and provide control capability in high angle of attack conditions and ***those systems operate properly and again in certain failure modes if there is an inaccurate angle of attack sensor feeding information to the airplane there is a procedure to handle that. . . . We’re going to make sure that we’re providing all the information necessary and appropriate training***, and go back to the core value here . . . ***The airplane is safe. We know how to fly it safely.*** And we’re very confident in that. . . .

168. When asked whether Boeing provided “information in terms of what to do should something change, was that information available to the pilots? Did they know how to operate it? Should the nose be in a different position?” Defendant Muilenburg again stated: “[y]eah, in fact that’s part of the training manual. It’s an existing procedure. So the bulletin we put out again last weekend, over the weekend, pointed to that existing flight procedure.”

169. Boeing’s November 13, 2018 statement and Defendant Muilenburg’s interview created the false impression that there was nothing wrong with the 737 MAX and that the Lion Air crash was caused by pilot error. In an interview with the *Associated Press*, Weaks explained that, although he was “not pleased” by Boeing’s Monday-morning disclosure of MCAS, he was satisfied that “we have been given, finally, the correct information.”

170. What the investing public did not know, however, was that Boeing had secretly requested permission from the FAA to update the 737 MAX’s FCOM to include references to MCAS. Incredibly, Boeing also suggested that pilots receive Level D differences training on the 737 MAX using a full-flight simulator. Boeing was also secretly working on software updates to MCAS to make it safer, despite publicly blaming the Lion Air pilots for the crash and repeatedly directing pilots and flight crews to use “existing flight procedures” to respond to MCAS.

171. On November 19, 2018, Boeing scheduled, and then cancelled, a conference call with its customers to reassure them about the safety of the 737 MAX. Instead, Boeing announced that it would hold a series of regional meetings to answer questions about the airplane.

172. That same day, Defendant Muilenburg sent an e-mail to all Boeing employees, but intended for the public domain. As reported by *The Seattle Times*, Defendant Muilenburg’s email sought to counter the supposedly “false assumptions” and purported “speculation” in the media regarding the Lion Air crash. In his e-mail, Defendant Muilenburg repeated that “***the 737 MAX***

*is a safe airplane* designed, built and supported by skilled men and women . . . .” Defendant Muilenburg also “*disputed specific reports in some media related to [MCAS]*” and “*specifically denied reports in some media outlets that the procedure pilots need to deal with such uncommanded movements was not in the 737 pilot manual and that pilots were not trained on how to handle it.*” “*That’s simply untrue,*” he said. Defendant Muilenburg’s email concluded by stating that Boeing would not debate the details of the Lion Air crash in the media so as to not “violate the integrity of the investigation.”

173. A few days later, on November 21, 2018, Boeing issued a press release titled, *Statement on Lion Air Flight JT 610 Investigation*. In the press release, Boeing again assured the market that “[w]e are confident in the safety of the 737 MAX. Safety remains our top priority and is a core value for everyone at Boeing.” Boeing also reiterated that, “[w]hile we can’t discuss the specifics of an on-going investigation, we have provided two updates for our operators around the world that re-emphasize existing procedures for these situations.”

174. On November 27, 2018, the Indonesian NTSC released its preliminary accident investigation report. *The Seattle Times* concluded that, based on the Indonesian NTSC’s report, three factors likely contributed to the Lion Air crash:

- A potential design flaw in Boeing’s new anti-stall addition to the MAX’s flight-control system and a lack of communication to airlines about the system.
- *The baffling failure of the Lion Air pilots to recognize what was happening and execute a standard procedure to shut off the faulty system.*
- And a Lion Air maintenance shortfall that allowed the plane to fly repeatedly without fixing the key sensor that was feeding false information to the flight computer on previous flights.

175. In response to the Indonesian NTSC’s accident investigation report, Boeing issued a press release again emphasizing that:

*Safety is a core value for everyone at Boeing and the safety of our airplanes, our customers' passengers and their crews is always our top priority.* As our customers and their passengers continue to fly the 737 MAX to hundreds of destinations around the world every day, *they have our assurance that the 737 MAX is as safe as any airplane that has ever flown the skies.*

176. Boeing also suggested that pilot error – rather than MCAS – was to blame for the Lion Air crash. The press release described how the pilots on the October 28, 2018 Lion Air flight “turned off the stabilizer trim switches within minutes of experiencing the automatic nose down trim, and continued with manual trim through the end of the flight. . . . [T]he remainder of the Oct. 28 flight was uneventful and . . . the flight continued to its destination.” Boeing pointed out that, “[u]nlike as is stated with respect to the prior flight, the [NTSC] report does not state whether the pilots performed the runaway stabilizer procedure or cut out the stabilizer trim switches.”

**XIV. In a Closed-Door Meeting with American Airlines Pilots, Boeing Admits that a Functioning AOA Disagree Alert Would Have Prevented the Lion Air Crash**

177. Also on November 27, 2018, Boeing executives, including Boeing Vice President Sinnott, Boeing Test Pilot, Craig Bomben, and Boeing’s Senior Lobbyist, John Moloney, had a closed-door meeting with American Airlines pilots. As later reported by *The New York Times*, the pilots urged Boeing to ask the FAA to issue an emergency airworthiness directive so that MCAS’s software could be updated. The Boeing executives resisted this suggestion because the 737 MAX would have to be grounded while MCAS was being fixed.

178. Michael Michaelis, an American Airlines pilot, asked the Boeing executives “why wouldn’t you say this is the smartest thing to do? Say we’re going to do everything we can to protect the traveling public in accordance with what our pilots unions are telling us.” Sinnott “didn’t budge, saying that it remained unclear that the new software, which automatically pushes the plane’s nose down, was responsible for the Lion Air crash. He added that he felt confident that

pilots had adequate training to deal with a problem, especially now that pilots – who were not initially informed about the new system – were aware of it.”

179. The American Airlines pilots “expressed frustration that Boeing did not inform them about the new software on the plane until after the Lion Air crash.” “***These guys didn’t even know the damn system was on the airplane, nor did anybody else,***” said Michaelis. Another American Airlines pilot, Todd Wissing expressed frustration that no mention of the system had been included in the training manual for the 737 MAX. “***I would think that there would be a priority of putting explanations of things that could kill you,***” Wissang said.

180. Sinnett told the pilots that “[t]he assumption is that the flight crews have been trained.” “Rightly or wrongly, that was the design criteria and that’s how the airplane was certified with the system and pilot working together.” In response to the pilots’ suggestion about the emergency airworthiness directive, Sinnett responded that “[w]e don’t want to rush and do a crappy job of fixing the right things and we also don’t want to fix the wrong things.” Sinnett also admitted that MCAS was flight critical, telling the pilots that, “***for flight critical software,*** I don’t think you want us to rush, rush it faster.” Sinnett acknowledged, however, that Boeing was looking into whether the 737 MAX had certain design defects. “One of the questions will be, is our design assumption wrong?” “We’re going through that whole thought process of, were our assumptions really even valid when we did this?”

181. Shockingly, Sinnett admitted to the American Airlines pilots that a functioning AOA Disagree Alert would have prevented the Lion Air crash. As later reported by *The Wall Street Journal*, Sinnett told the pilots that “[t]his wouldn’t have happened to you guys” because American Airlines had purchased the optional AOA Indicator on the 737 MAX. The functioning

AOA Disagree Alert would have alerted American Airlines' pilots to a potential issue with MCAS even before takeoff.

182. Sinnett's explanations were nothing more than lip-service. As BCA Chief Engineer Hamilton later admitted to the House of Representatives' Committee on Transportation and Infrastructure, Boeing knew “[i]n the hours following the Lion Air accident” that MCAS was to blame for the crash and that a software fix would be insufficient to mitigate the risk posed by MCAS because the pilots’ actions “didn’t quite follow the assumptions that [Boeing] had based the design on.”

#### **XV. Defendants Continue to Falsely Vouch for the Safe Operation of the 737 MAX**

183. On November 29, 2018, Boeing repeated the Company line to *The Washington Post*, promising that its customers and their passengers “***have our assurance that the 737 Max is as safe as any airplane that has ever flown the skies.***”

184. On December 7, 2018, Defendant Muilenburg gave an interview with CNBC. During the interview, Defendant Muilenburg stated:

Part of what we wanted to accomplish was seamless training and introduction for our customers, so ***we purposely designed the airplane to behave in the same way.*** So even though it’s a different airplane design, the control laws that fly the airplane are designed to make the airplane ***behave the same way in the hands of the pilot.***

#### **XVI. Boeing Misleads Investors that Production of the 737 MAX Is Scheduled to Continue Uninterrupted**

185. Around this time – and despite the fact that he was retired – Pierson renewed his efforts to inform Defendants of the quality control and safety problems he witnessed at Boeing’s Renton facility. Pierson attempted to speak with Boeing’s lead investigator for the Lion Air crash multiple times to no avail.

186. Eventually, on December 19, 2018, Pierson sent a letter directly to Defendant Muilenburg. In the letter, Pierson explained who he was and that he believed that he had information about the 737 MAX production process that could be helpful to the investigation of the Lion Air crash. Pierson also made clear that he had tried to contact Boeing officials several times already and pleaded with Defendant Muilenburg to connect him with Boeing's lead investigator. A few weeks later, Padraic Fennelly, BCAS's Assistant General Counsel, contacted Pierson regarding his letter. The two discussed Pierson's concerns, but Defendants ignored Pierson's pleas to slow down production of the 737 MAX. In fact, Defendants did the exact opposite.

187. On January 30, 2019, Boeing announced its financial results for the fourth quarter and full-year 2018, and its guidance for 2019. During a conference call that day, Defendant Muilenburg told investors that Boeing would be *ramping up* its production of the 737 MAX. He stated:

Our customers continue to recognize the superior value proposition of our more fuel-efficient airplanes, as reflected in the strong intake of new orders we saw last year. . . . starting with the narrow-body, ***our current production rate of 52 per month and planned increase to 57 this year is based on our backlog of more than 4,700 aircraft and a production skyline that is sold out into early next decade.*** The 737 program added 13 new customers during the year, and the MAX family surpassed 5,000 net orders in December. ***We continue to assess the market upward pressure on the 737 production rate.***

188. Defendant Smith similarly represented that:

***The ramp-up on the 737 MAX production continues, and we expect 737 MAX to account for approximately 90% of total 737 deliveries in 2019.*** In all, BCA is expected to deliver between 895 and 905 airplanes for the full year. ***Incorporated in this delivery guidance assumption are planned 737 and 787 production rate increases*** and the intercompany deliveries of the military aircraft from BCA to BDS. . . .

As we look towards the remainder of the year, our key focus areas are continuing to manage the 737 recovery progress within our factory and throughout our supply chain, ***including assuring rate readiness for a smooth transition to 57 a month . . .***

189. In response to a question from a Morgan Stanley & Co. LLC analyst about the production rate for the 737 MAX, Defendant Muilenburg again stated:

***[W]e're moving forward on our plans to ramp up to 57 a month during the year. . . . We still have some work to do before we move the entire line to 57 a month, and we're going to be very, very disciplined in that process. Again, we're making good progress. We know exactly what needs to be done,*** but we're going to just look at this through very clear eyes and step through it day by day, week by week, and make sure that we in a very disciplined and smooth way move to 57 a month.

190. An analyst from Baird & Co., Inc. then asked about the orders Boeing had received for the 737 MAX. Defendant Muilenburg responded:

***[W]e continue to see strong order momentum there. . . . So you see continued momentum on the MAX sales front.***

***That airplane is creating value in the market for our customers,*** and we are oversold against our production profile. ***We talked earlier about ramping up to 57 a month. We are oversold against that profile. We're filling skyline slots way out in 2023. We continue to see upward market pressure overall on the production rate as a result. And we think the demand for that airplane continues to be sustained.***

And there's always timing variability, ***but in terms of the MAX, the demand signals in the marketplace continue to be very strong.***

191. Boeing's earning presentation contained similar statements about how Boeing “*[i]ncreased 737 [production] rate to 52/mo,*” had a “*robust backlog of \$412B*” and that the “*737 MAX family surpassed 5,000 net orders.*”

192. On February 6, 2019, Defendant Smith participated in a question-and-answer segment during the 40th Annual Cowen Aerospace and Defense Conference. When asked whether

Boeing was concerned about the certification process for the remaining airplanes in the 737 MAX family, Defendant Smith stated:

*Look, certification is a big part of any development program. But I'd like to think we get well ahead of that and obviously working our way through 737 and all the derivatives of the 737 MAX, the 787 and those derivatives and certifying the last one being 787-10. . . So, I think we got a good plan in place. I wouldn't tell you that we see anything that's been outside the norm of what we've normally been through in our certification of our other aircraft.*

193. Defendant Smith also stated that Boeing's production rate for the 737 MAX was “*getting stable at 52 and getting the confidence in the rate readiness to go up to 57, which is to plan. So, certainly the market demand is there. We're in a oversold position.*” Later in the session, Defendant Smith reiterated that Boeing was increasing the production rate for the 737 MAX, “*going up to 52 and getting to 57. That's a driver.*”

194. On February 7, 2019, after Defendants disclosed that they were ramping up production of the 737 MAX, Pierson sent an extensive follow-up e-mail to Fennelly and Boeing's General Counsel, Michael Luttig. Pierson's e-mail reiterated all of the quality control and safety concerns that he had already raised multiple times with Boeing senior management and concluded with a dire warning about the risks that these issues posed to the flying public:

*Taken as a whole, the sheer volume of these issues highlights the considerable & unnecessary risk the company was (is still?) taking to meet ever increasing airplane production rates and delivery schedules.* Employees with 20+ years 737 experience stated they had never seen the production system in such bad shape. *As you stated, leaders based in Chicago were aware of these recovery issues. Nonetheless being aware of these problems and fixing them are two completely different matters.* Just because an airplane flies safely one day doesn't mean it will fly safely the next. This is the insidious nature of imbedded defects....

Again to be very clear, I'm not saying anyone did anything deliberate to jeopardize the Lion Air airplane. What I am saying is production mistakes may have been made with this airplane and potentially others, due to the reasons outlined above. I believe

Boeing has a duty to proactively support the accident investigation. I can't help but wonder what Boeing's response would be if this had been a U.S. airline accident. I know there are billions of dollars at stake in the contract between Boeing & Lion Air. I'm confident Boeing has the resources to fix these problems. *The question is whether or not there is the ethical leadership and will to set aside pride and potential liabilities to get to the truth.*

195. The next day, February 8, 2019, Boeing filed the 2018 10-K. In a section describing the 737 Program, Boeing stated: "*We continue to plan to increase the production rate to 57 per month in 2019.*" The "Program Development Chart" for the 737 Program stated that Boeing's *initial deliveries of the 737 MAX 7 and 737 MAX 10 were scheduled for 2019 and 2020*, respectively.

196. On February 19, 2019, Pierson escalated his concerns to Boeing's entire Board of Directors. He never received a response. Less than three weeks later, on March 10, 2019, Ethiopian Airlines flight 302 crashed, killing everyone onboard. Two days after that, on March 12, 2019, Pierson again wrote to Boeing's entire Board of Directors, including Defendant Muilenburg, reiterating the quality control and safety concerns he had described in his previous letters and e-mails. No one ever responded.

197. Also in February, Boeing produced documents to the DOJ in connection with the Criminal Action, including the instant messages between Forkner and Gustavsson discussed in Paragraph 137. By this point, at the very latest, Defendants knew that Boeing and Forkner had lied to the FAA during the certification process regarding the design and operational scope of MCAS, but they did nothing to correct this fact or ensure that the 737 MAX was properly certified.

#### **XVII. As Defendants' Fraud Is Gradually, But Only Partially Revealed, Defendants Continue to Mislead the Investing Public**

198. The market began to learn the truth about MCAS, the 737 MAX's certification and re-certification, safety and reliability, production rate and backlog, and return-to-service timeline,

as well as the truth about Boeing's regulatory compliance and the effectiveness of Boeing's internal disclosure controls and procedures through a series of events and announcements. However, each of these disclosures was only partially corrective of Defendants' fraud, and constituted only a partial materialization of the previously concealed risks. The leakage by Defendants of the truth was gradual, and occurred over an extended period of time. In fact, as these events occurred and announcements were made, Defendants continued to try to obscure the truth from investors by making additional material misstatements and omissions of fact.

**A. Ethiopian Airlines Flight 302 Crashes and International Regulators Immediately Ground the 737 MAX**

199. On March 10, 2019, Ethiopian Airlines flight 302 departed Addis Ababa, Ethiopia, for Nairobi, Kenya. One minute into the flight, MCAS took over the airplane and forced its nose downward into a steep dive. The pilots fought back and briefly regained control of the airplane before MCAS reactivated and pushed the plane downward into another steep dive.

200. Trying to follow the procedures confusingly outlined by Boeing in the months following the Lion Air crash, the pilots disconnected the airplane's electric trim motor and tried to regain control. However, having shut off the airplane's electric power to disable MCAS, the pilots' ability to use the electric switch to trim the stabilizer back into neutral position had been eliminated. The pilots were unable to move the stabilizer by hand, so they were forced to reconnect the airplane's electric trim motor. But that just gave MCAS the power to reactivate and cause the airplane to crash. Less than a minute later, the airplane crashed in a field at nearly 700 miles per hour, creating a crater nearly 100 feet deep and killing all 157 people onboard. The airplane was airborne for only six minutes.

201. Given the stark similarities between the Lion Air and Ethiopian Airlines crashes – both occurred within five months of each other, in the first 15 minutes of flight, and on brand-new

737 MAX airplanes with experienced pilots at the helm – international regulators and airlines ordered the grounding of the 737 MAX. Over the next two days, regulators in China, Indonesia, and Mongolia grounded the 737 MAX, and Ethiopian Airlines, Aerolineas Argentina, Cayman Airways, Comair, Eastar Jet, Gol Transportes Aereos, and Royal Air Maroc, among others, all stopped flying their 737 MAXs.

202. On March 12, 2019, regulators in Singapore, India, Turkey, Australia, and Malaysia, among others, followed suit and grounded the 737 MAX, while the United Kingdom banned the 737 MAX from its airspace altogether. The European Union Aviation Safety Agency likewise suspended all 737 MAX flights in Europe due to “similarities with the Lion Air accident data.”

203. The Ethiopian Airlines crash and widespread grounding of the 737 MAX was a partial disclosure and partial materialization of the foreseeable risk that Defendants had previously concealed from the investing public. The 737 MAX was fundamentally unsafe and had been certified based on incorrect facts about MCAS. The Ethiopian Airlines crash and widespread grounding of the 737 MAX partially revealed to the market that Defendants’ prior representations were false or materially misleading. Boeing’s stock **plummeted more than 11%** in response to this news, from a closing price of \$422.54 per share on March 8, 2019, to a closing price of \$375.41 on March 12, 2019.

**B. Boeing Reveals that it Is Making Changes to MCAS, But Falsely Claims the 737 MAX is Still Safe**

204. Boeing immediately began damage control in an effort to stop the free-fall of its stock. On March 11, 2019, Boeing issued a *Statement on 737 MAX Software Enhancement*, which stated, in relevant part:

*Safety is a core value for everyone at Boeing and the safety of our airplanes, our customers' passengers and their crews is always our*

*top priority. The 737 MAX is a safe airplane* that was designed, built and supported by our skilled employees who approach their work with the utmost integrity.

For the past several months and in the aftermath of Lion Air Flight 610, Boeing has been developing a flight control software enhancement for the 737 MAX, *designed to make an already safe aircraft even safer. . .*

A pitch augmentation control law (MCAS) was implemented on the 737 MAX to improve aircraft handling characteristics and decrease pitch-up tendency at elevated angles of attack. *It was put through flight testing as part of the certification process prior to the airplane entering service. MCAS does not control the airplane in normal flight; it improves the behavior of the airplane in a non-normal part of the operating envelope.*

*Boeing's 737 MAX Flight Crew Operations Manual (FCOM) already outlines an existing procedure to safely handle the unlikely event of erroneous data coming from an angle of attack (AOA) sensor. The pilot will always be able to override the flight control law using electric trim or manual trim.* In addition, it can be controlled through the use of the existing runaway stabilizer procedure as reinforced in the Operations Manual Bulletin (OMB) issued on Nov. 6, 2018.

205. The next day, March 12, 2019, Boeing issued another *Statement of 737 MAX*

*Operation*, which stated:

*Safety is Boeing's number one priority and we have full confidence in the safety of the 737 MAX.* We understand that regulatory agencies and customers have made decisions that they believe are most appropriate for their home markets. We'll continue to engage with them to ensure they have the information needed to have confidence in operating their fleets. The United States Federal Aviation Administration is not mandating any further action at this time, and based on the information currently available, *we do not have any basis to issue new guidance to operators.*

**C. Despite Defendant Muilenburg's Personal Plea to President Trump, the FAA Grounds the 737 MAX**

206. On March 13, 2019 – despite Boeing's unwavering confidence in the safety of the 737 MAX and a personal plea by Defendant Muilenburg to President Donald Trump – the FAA

and NTSB grounded the 737 MAX indefinitely. According to the FAA, “[i]t became clear to all parties that the track of the Ethiopian Airlines [flight] was very close and behaved very similarly to the Lion Air flight.”

207. Boeing then issued a press release titled, *In Consultation with the FAA, NTSB and its Customers, Boeing Supports Action to Temporarily Ground 737 MAX Operations*. Though Defendant Muilenburg had – less than 24 hours earlier – “made the case [to President Trump] that the 737 [MAX] planes should not be grounded in the United States,” Boeing now purported to support the FAA’s decision to ground the 737 MAX “out of an abundance of caution.” The press release stated, in relevant part:

***Boeing continues to have full confidence in the safety of the 737 MAX.*** However, after consultation with the U.S. Federal Aviation Administration (FAA), the U.S. National Transportation Safety Board (NTSB), and aviation authorities and its customers around the world, ***Boeing has determined -- out of an abundance of caution and in order to reassure the flying public of the aircraft's safety -- to recommend to the FAA the temporary suspension of operations of the entire global fleet of 371 737 MAX aircraft.***

***We are supporting this proactive step out of an abundance of caution. Safety is a core value at Boeing*** for as long as we have been building airplanes; and it always will be. ***There is no greater priority for our company and our industry.*** We are doing everything we can to understand the cause of the accidents in partnership with the investigators, deploy safety enhancements and help ensure this does not happen again.”

#### D. ***The Seattle Times Reveals Boeing’s Flawed Safety Analysis of MCAS***

208. On Sunday, March 17, 2019, *The Seattle Times* released an investigative report titled, *Flawed Analysis, failed oversight: How Boeing, FAA certified the suspect 737 MAX flight control system.* The report revealed that “the original safety analysis that Boeing delivered to the FAA for a new flight control system on the MAX – a report used to certify the plane as safe to fly

– had several crucial flaws.” According to “current and former engineers involved with the evaluations or familiar with the document,” Boeing’s safety analysis:

- Understated the power of the new flight control system, which was designed to swivel the horizontal tail to push the nose of the plane down to avert a stall. *When the planes later entered service, MCAS was capable of moving the tail more than four times farther than was stated in the initial safety analysis document.*
- *Failed to account for how the system could reset itself each time a pilot responded,* thereby missing the potential impact of the system repeatedly pushing the airplane’s nose downward.
- *Assessed a failure of the system as one level below “catastrophic.”* But even that “hazardous” danger level should have precluded activation of the system based on input from a single sensor — and yet that’s how it was designed.

209. The report also partially revealed the extent to which Boeing had control over the certification of the 737 MAX, and MCAS, in particular. “Early on in certification of the 737 MAX, the FAA safety engineering team divided up the technical assessments that would be delegated to Boeing versus those they considered more critical and would be retained within the FAA.” However, about halfway through the certification process, Boeing management “prodded” the FAA to “speed the process” and “re-evaluate what would be delegated” for its review. “In this atmosphere, the System Safety Analysis on MCAS, just one piece of the mountain of documents needed for certification, was delegated to Boeing.”

210. Finally, the report noted that, “[b]oth Boeing and the FAA were informed of the specifics of this story and were asked for responses 11 days ago, *before the second crash* of a 737 MAX on March 10.”

211. Later that day, Defendant Muilenburg issued a *Statement on Ethiopian Airlines Flight 302 Accident Investigation.* Defendant Muilenburg stated, in relevant part:

Boeing continues to support the investigation, and is working with the authorities to evaluate new information as it becomes available. ***Safety is our highest priority as we design, build and support our airplanes.*** As part of our standard practice following any accident, we examine our aircraft design and operation, and when appropriate, institute product updates to further improve safety. While investigators continue to work to establish definitive conclusions, ***Boeing is finalizing its development of a previously-announced software update and pilot training revision that will address the MCAS flight control law's behavior in response to erroneous sensor inputs.***

212. Defendant Muilenburg’s statement was not enough to allay investors’ concerns about the safety of the 737 MAX and Boeing’s heavy involvement in the certification process. Boeing’s stock fell nearly 2% in response to *The Seattle Times* report, from a closing price of \$378.99 on March 15, 2019, to a closing price of \$372.28 on March 18, 2019. *The Seattle Times* report was a partial disclosure and partial materialization of the foreseeable risk that Defendants had previously concealed from the investing public. The 737 MAX was fundamentally unsafe and had been certified based on incorrect facts about MCAS. *The Seattle Times* article partially revealed to the market that Defendants’ prior representations were false or materially misleading.

213. On March 18, 2019, Boeing published a letter from Defendant Muilenburg to “Airlines, Passengers and the Aviation Community.” In the letter, Defendant Muilenburg reassured Boeing’s customers and investors and the flying public that the 737 MAX was safe and that Boeing was just making it “even safer” by updating MCAS’s software:

***Safety is at the core of who we are at Boeing, and ensuring safe and reliable travel on our airplanes is an enduring value and our absolute commitment to everyone.*** This overarching focus on safety spans and binds together our entire global aerospace industry and communities. We’re united with our airline customers, international regulators and government authorities in our efforts to support the most recent investigation, understand the facts of what happened and help prevent future tragedies. Based on facts from the Lion Air Flight 610 accident and emerging data as it becomes available from the Ethiopian Airlines Flight 302 accident, ***we’re taking actions to fully ensure the safety of the 737 MAX.***

Boeing has been in the business of aviation safety for more than 100 years, and *we'll continue providing the best products, training and support to our global airline customers and pilots. This is an ongoing and relentless commitment to make safe airplanes even safer. Soon we'll release a software update and related pilot training for the 737 MAX that will address concerns discovered in the aftermath of the Lion Air Flight 610 accident. . . .*

*Our entire team is devoted to the quality and safety of the aircraft we design, produce and support.*

**E. The New York Times Reveals that the AOA Indicator Was Optional**

214. On March 21, 2019, *The New York Times* released an article titled, *Doomed Boeing Jets Lacked 2 Safety Features that Company Sold Only as Extras*. The article revealed for the first time that “[a]s the pilots of the doomed Boeing jets in Ethiopia and Indonesia fought to control their planes, they lacked two notable safety features in their cockpits. One reason: Boeing charged extra for them.” The article explained that the two features – the AOA Disagree Alert and AOA Indicator – could have helped the Lion Air and Ethiopian Airlines pilots identify and combat MCAS. As Bjorn Fehrm, an aeronautical and economical analyst at Leeham News explained, the features are “*critical, and cost almost nothing for the airlines to install.*” “*Boeing charges for them because it can. But they're vital for safety.*”

215. *The New York Times* article was a partial disclosure and partial materialization of the foreseeable risk that Defendants had previously disclosed to the investing public. The 737 MAX was fundamentally unsafe. *The New York Times* report partially revealed to the market that Defendants’ prior representations were false or materially misleading. Boeing’s stock fell nearly 1% in response to *The New York Times* report, from a closing price of \$376.16 on March 20, 2019, to a closing price of \$372.70 on March 21, 2019.

216. The next day, March 22, 2019, Boeing issued press release in response to *The New York Times* article. The press release stated, in relevant part:

*All Boeing airplanes are certified and delivered to the highest levels of safety consistent with industry standards. Airplanes are delivered with a baseline configuration, which includes a standard set of flight deck displays and alerts, crew procedures and training materials that meet industry safety norms and most customer requirements. Customers may choose additional options, such as alerts and indications, to customize their airplanes to support their individual operations or requirements . . . .*

**F. Defendants Reveal that the MCAS Problem Was Impacting Production of the 737 MAX**

217. A week later, on March 27, 2019, Boeing met with pilots and airline executives at its Renton, Washington factory. *The New York Times* reported that, during the meeting, Boeing continued to represent that the 737 MAX was safe. The Company also posted a statement on its website claiming that it “***developed an MCAS software update to provide additional layers of protection if the AOA sensors provide erroneous data.***”

218. On April 4, 2019, the Ethiopian Aircraft Accident Investigation Bureau released its preliminary investigation report. Ethiopian Transport Minister Dagmawit Moges explained that “***the crew performed all the procedures repeatedly provided by the manufacturer but was not able to control the aircraft.***”

219. After the markets closed on April 5, 2019, Boeing issued a statement from Defendant Muilenburg providing a “737 MAX Software, Production and Process Update” and proclaiming “We Own Safety.” Defendant Muilenburg stated:

We now know that the recent Lion Air Flight 610 and Ethiopian Airlines Flight 302 accidents were caused by a chain of events, with a common chain link being erroneous activation of the aircraft's MCAS function. ***We have the responsibility to eliminate this risk, and we know how to do it. As part of this effort, we're making progress on the 737 MAX software update that will prevent accidents like these from ever happening again.*** Teams are working tirelessly, advancing and testing the software, conducting non-advocate reviews, and engaging regulators and customers worldwide ***as we proceed to final certification.*** I recently had the opportunity to experience the software update performing safely in

action during a 737 MAX 7 demo flight. We're also finalizing new pilot training courses and supplementary educational material for our global MAX customers. *This progress is the result of our comprehensive, disciplined approach and taking the time necessary to get it right. . . .*

*Safety is our responsibility, and we own it.*

220. Defendant Muilenburg also revealed that Boeing was establishing “a committee to review our company-wide policies and processes for the design and development of the airplanes we build. The committee will confirm the effectiveness of our policies and procedures for assuring the highest level of safety on the 737-MAX program, as well as our other airplane programs, and recommend improvements to our policies and procedures.”

221. Finally, Defendant Muilenburg revealed that Boeing was “adjusting the 737 production system temporarily to accommodate the pause in MAX deliveries, *allowing us to prioritize additional resources to focus on software certification and returning the MAX to flight.* We have decided to temporarily move from a production rate of 52 airplanes per month to 42 airplanes per month starting in mid-April.”

222. Defendant Muilenburg’s statements were a partial disclosure and partial materialization of the foreseeable risk that Defendants had previously concealed from the investing public. The 737 MAX was fundamentally unsafe and could not be fixed by way of a quick and easy change to MCAS. The news that MCAS still had not been fixed and that Boeing was adjusting its production schedule to prioritize the recertification and return to service of the 737 MAX partially revealed to the market that Defendants’ prior representations were false and materially misleading. Boeing’s stock fell over 4% in response, from a closing price of \$391.93 on April 5, 2019, to a closing price of \$374.52 on April 8, 2019.

**G. Defendants Misrepresent their Re-Certification Efforts and the Timeline for the 737 MAX's Return to Service**

223. Shortly thereafter, on April 11, 2019, Defendant Muilenburg presented at the George W. Bush Presidential Center Forum on Leadership. During his presentation, Defendant Muilenburg again represented that the 737 MAX was safe, that the software update to MCAS was in its final stages and would be implemented shortly thereafter, and that Boeing had already “met all certification requirements” necessary to get the 737 MAX back in service. He stated:

First, it’s important to communicate clearly and openly. . . . It’s important that people’s concerns are heard and that their questions answered. In times like these, it’s not possible to over-communicate, and *I’ve been updating our people frequently as details emerge and are available, and it’s appropriate to do so aligned with our international aviation protocol.*

*As we learned the facts, I also reached out to our airline customers, partners and communities in open letters and videos to share our support of the investigations, and the steps underway to avoid future accidents and our ongoing priority of safety. . . .*

*From the days immediately following the Lion Air accident, our top engineers and technical experts have been working tirelessly in collaboration with the Federal Aviation Administration and our customers to finalize and implement a software update that will ensure accidents like these never happen again.*

*The update will make the 737 MAX even safer by preventing erroneous angle of attack sensor readings from triggering the Maneuvering Characteristics Augmentation System, or MCAS, something that initial investigation reports indicate occurred in both MAX accidents, as one link in a longer chain of events. We know we can break this chain link. It’s our responsibility to eliminate this risk. . . .*

Overall, our team has made 96 flights totaling a little over 159 hours of air time with the updated software. They will conduct additional test and production flights in the coming weeks *as we continue to demonstrate that we’ve identified and met all certification requirements. We look forward to completing near-term milestones on the path to final certification.*

224. On April 24, 2019, Boeing filed the 1Q2019 10-Q with the SEC. With respect to the grounding of the 737 MAX, the 1Q2019 10-Q stated:

We have been developing a software update to the Maneuvering Characteristics Augmentation System (MCAS) on the 737 MAX, together with an associated pilot training and supplementary education program. ***We continue to work with the FAA and other regulatory agencies worldwide to develop and certify the software update and training program.***

225. In the press release accompanying the 1Q2019 10-Q, Boeing again represented that it was “***making steady progress on the path to final certification for a software update for the 737 MAX***, with over 135 test and production flights of the software update complete. ***The company continues to work closely with global regulators and our airline partners to comprehensively test the software and finalize a robust package of training and educational resources.***”

226. During a conference call with investors the next day, April 25, 2019, Defendant Muilenburg was asked by an analyst from Sanford C. Bernstein & Co. LLC about the process for returning the 737 MAX to service. Defendant Muilenburg responded:

[R]eturning the airplane to service and doing so safely, just to give you a sense of the key steps to go there, as we know from the accident investigations to-date, as and publicly announced through the preliminary reports, both accidents were a chain of events. We know there was one common link in that chain of events and that was the activation of the MCAS system with erroneous angle of attack data. That’s been well published. ***And as we said, we understand how to address that link. That’s our responsibility. We own that, and that’s what that software update does. . . .***

***The next step in that process will be the certification flight under the FAA’s authority, and we are working with the FAA right now to prepare for that in the near term.***

227. A Bank of America Merrill Lynch analyst then asked Defendant Muilenburg “how did this happen, right? . . . Is there any way you can give us a feeling for how did this slip through the engineering organization?” Defendant Muilenburg stated:

***Yeah, Ron, there is no technical slip or gap here, right?*** Again, as I mentioned, we know that both accidents were a series of events, and that is very common to all accidents that we’ve seen in history. And what we know is that in this case, there was erroneous angle-of-attack information that came into the airplane from multiple causes. We know at that some point during the flight, that activated the MCAS control laws, and ***we know that ultimately there were actions or actions not taken that contributed to the final outcome.***

...

***But I can tell you with confidence that we understand our airplane, we understand how the design was accomplished, how the certification was accomplished, and remain fully confident in the product that we’ve put in the field.*** But we also know there are areas that we can improve, and that is the source of the software update here. ***But there was no surprise or gap or unknown here or something that somehow slipped through a certification process. Quite the opposite. We know exactly how the airplane was designed. We know exactly how it was certified. We have taken the time to understand that.*** That has led to the software update that we’ve been implementing and testing, and ***we’re very confident that when the fleet comes back up, the MAX will be one of the safest airplanes ever to fly.***

228. Defendant Smith also told investors during the conference call that Boeing was “***taking steps amid current challenges to preserve the future value and growth of this important franchise for our company and for our customers.***”

229. Defendant Muilenburg also reassured investors that Boeing’s “***737 program has a backlog of more than 4,400 aircraft and a production skyline that is sold out into early next decade.***”

**H. Defendants Reveal that the AOA Disagree Alert Was Not Operable on All 737 MAX Airplanes, But Downplay Its Importance**

230. On April 28, 2019, Southwest issued a statement describing what Boeing had falsely told it about the AOA Disagree Alert, both before and after the Lion Air crash:

*Upon delivery (prior to the Lion Air event), the AOA Disagree lights were depicted to us by Boeing as operable on all MAX aircraft, regardless of the selection of optional AOA Indicators on the Primary Flight Display (PFD). The manual documentation presented by Boeing at Southwest's MAX entry into service indicated the AOA Disagree Light functioned on the aircraft, similar to the Lights on our NG series. After the Lion Air event, Boeing notified us that the AOA Disagree Lights were inoperable without the optional AOA Indicators on the MAX aircraft.* At that time, Southwest installed the AOA Indicators on the PFD, resulting in the activation of the AOA Disagree lights - both items now serve as an additional crosscheck on all MAX aircraft.

231. Boeing issued its own statement on April 29, 2019, in response to Southwest's. Although Boeing acknowledged that the AOA Disagree Alert "was not activated as intended," the Company still maintained that pilots had "all flight data and information needed to safely operate the aircraft":

*Boeing included the disagree alert as a standard feature on the MAX, although this alert has not been considered a safety feature on airplanes and is not necessary for the safe operation of the airplane.* Boeing did not intentionally or otherwise deactivate the disagree alert on its MAX airplanes.

*The disagree alert was intended to be a standard, stand-alone feature on MAX airplanes. However, the disagree alert was not operable on all airplanes because the feature was not activated as intended.*

The disagree alert was tied or linked into the angle of attack indicator, which is an optional feature on the MAX. Unless an airline opted for the angle of attack indicator, the disagree alert was not operable.

*On every airplane delivered to our customers, including the MAX, all flight data and information needed to safely operate the aircraft*

*is provided in the flight deck and on the flight deck display. This information is readily accessible to pilots, and it always has been.*

232. Boeing issued another statement downplaying the importance of the AOA Disagree Alert on May 5, 2019. The statement provided, in relevant part:

*On every airplane delivered to our customers, including the MAX, all flight data and information needed to safely operate the aircraft is provided in the flight deck on the primary flight deck displays. This information is provided full-time in the pilots' primary field of view, and it always has been. . . .*

Neither the angle of attack indicator nor the AOA Disagree alert are necessary for the safe operation of the airplane. *They provide supplemental information only, and have never been considered safety features on commercial jet transport airplanes.*

The Boeing design requirements for the 737 MAX included the AOA Disagree alert as a standard, standalone feature, *in keeping with Boeing's fundamental design philosophy of retaining commonality with the 737NG*. In 2017, within several months after beginning 737 MAX deliveries, engineers at Boeing identified that the 737 MAX display system software did not correctly meet the AOA Disagree alert requirements. The software delivered to Boeing linked the AOA Disagree alert to the AOA indicator, which is an optional feature on the MAX and the NG. Accordingly, the software activated the AOA Disagree alert only if an airline opted for the AOA indicator.

When the discrepancy between the requirements and the software was identified, Boeing followed its standard process for determining the appropriate resolution of such issues. *That review, which involved multiple company subject matter experts, determined that the absence of the AOA Disagree alert did not adversely impact airplane safety or operation. Accordingly, the review concluded, the existing functionality was acceptable until the alert and the indicator could be delinked in the next planned display system software update.*

**I. Defendants Again Falsely Represent that the 737 MAX Is Close to Being Recertified and Returning to the Skies**

233. On May 29, 2019, Defendant Muilenburg presented at the Sanford C. Bernstein Strategic Decisions Conference. During his remarks, Defendant Muilenburg again represented

that Boeing was in the final stages of the re-certification process and that the 737 MAX would be returned to service in the near future:

[W]e've been working hand-in-hand with the investigation authorities on both accidents. We've been able to with them gain a clear insight on what occurred. We know that in both accidents, a common link was the so-called MCAS software on the MAX that you've all read about in the news. We've identified specific improvements to that software. We've completed the engineering testing and flight testing on that software and *we are now in the process of applying for final certification. We are finishing that dialogue with the FAA, working through a series of questions and answers with them.* Once that's complete, we will schedule the certification flight and that would be the next step to returning the airplane to service. So that is all work that we are doing hourly, daily, very active, number one focus for my company right now, getting the 737 MAX fleet returned to service safely.

234. Defendant Muilenburg went on to say that Boeing was:

*[M]aking clear and steady progress and that includes the work that we're doing on the airplane update, the software update, working through the certification process with the FAA, heading towards our certification flight.* We're also working on updates to training and education materials, and we've had a number of sessions with pilots to get their inputs on those training materials and working that with our customers and regulatory authorities.

235. Defendant Smith made similar statements during the UBS Global Industrials and Transportation Conference on June 5, 2019. During his presentation, Defendant Smith stated that Boeing was “day-in and day-out working with our regulators and *ensuring that we're answering all the questions, addressing any concerns that are taking place, that's a daily occurrence.* So we've got a team working seven days a week, addressing anything that comes in.” Defendant Smith went on to explain that Boeing had “*resources from across the company that are just turning these things around in a very timely manner and ensuring that we're meeting their priorities and the needs of the regulators. . . . look there's a lot of progress. There is a lot of progress that's been made.*”

236. On June 7 2019, CNET published an article regarding the 737 MAX's AOA Disagree Alert. The CNET article referenced a May 31, 2019 statement from Boeing in which the Company reiterated its previous statement that “*the absence of [an AOA Disagree] alert didn’t adversely affect airplane safety or operation.*”

**J. Defendants Ignore the FAA’s Request that Boeing Stop Misleading the Market**

237. Unbeknownst to Boeing’s investors, between June 17 and 23, 2019, Defendant Muilenburg met in secret with the Acting Administrator of the FAA, Daniel Elwell, at the Paris Air Show. As *The Wall Street Journal* later reported, Defendant Muilenburg met with Elwell in the back of a parked military plane, not at Boeing’s base at the show, to avoid public scrutiny. Elwell “*asked Muilenburg that Boeing slow down its talk of progress, giving the FAA space to exercise scrutiny . . . the agency needed to be seen as independent.*” “*FAA officials had grown impatient with Boeing’s optimism about putting the MAX back in service.*” According to people familiar with the meeting, Defendant Muilenburg responded “[y]ou’re right,” “[w]e’re not going to push.”

238. Approximately one week later, on June 26, 2019, Defendant Muilenburg presented at the Aspen Ideas Festival. Ignoring the FAA’s pleas for patience, Defendant Muilenburg stated that the “*end of summer*” 2019 – only one or two months away – was “*still the timeframe [Boeing] was looking at*” for the return to service of the 737 MAX.

**K. Boeing Reveals More Significant Changes to MCAS But Claims that the 737 MAX Will Be Recertified and Return to the Skies Early in the Fourth Quarter of 2019**

239. Also on June 26, 2019, after the market had closed, Boeing released a statement on Twitter regarding a “potential risk that Boeing must mitigate” before the FAA would re-certify the 737 MAX. Boeing also published a statement “on 737 MAX software” on its website. The statement read:

The safety of our airplanes is Boeing's highest priority. *During the FAA's review of the 737 MAX software update and recent simulator sessions, the Federal Aviation Administration (FAA) identified an additional requirement that it has asked the company to address through the software changes* that the company has been developing for the past eight months. The FAA review and process for returning the 737 MAX to passenger service are designed to result in a thorough and comprehensive assessment. *Boeing agrees with the FAA's decision and request, and is working on the required software.* Addressing this condition will reduce pilot workload by accounting for a potential source of uncommanded stabilizer motion. *Boeing will not offer the 737 MAX for certification by the FAA until we have satisfied all requirements for certification of the MAX and its safe return to service.*

240. Boeing's statements were a partial disclosure and partial materialization of the foreseeable risk that Defendants had previously concealed from the investing public. The 737 MAX was fundamentally unsafe and could not be fixed by way of a quick and easy change to MCAS. The news that MCAS needed additional changes and that the 737 MAX's recertification and return to service would be delayed partially revealed to the market that Defendants' prior representations were false or materially misleading. Boeing's stock fell nearly 3% in response to Boeing's statements, from a closing price of \$374.94 on June 26, 2019, to a closing price of \$364.02 on June 27, 2019.

241. However, Defendants continued to make false statements to investors. On July 18, 2019, Boeing issued a press release detailing its recertification efforts with the FAA and providing an updated timeframe for the 737 MAX's return to service. The press release stated that Boeing "*continues to work with civil aviation authorities to ensure the 737 MAX's safe return to service*" and "*has assumed that regulatory approval of 737 MAX return to service in the U.S. and other jurisdictions begins early in the fourth quarter 2019.*" Boeing further assumed "*a gradual increase in the 737 production rate from 42 per month to 57 per month in 2020.*"

**L. Defendants Reveal that the Production of the 737 MAX Could Be Temporarily Shut Down**

242. On July 24, 2019, Boeing filed the 2Q2019 10-Q. During a conference call that day, Defendant Muilenburg stated:

Now, let me turn to the latest on the MAX technical updates. . . . we are working with the FAA and other regulators to complete as many elements of the certification process as possible in parallel with the development of the software update. *We will submit our final certification package to the FAA once we have satisfied all of their requirements, which we currently estimate will be in the September timeframe.*

243. Defendant Smith likewise represented that “[f]or the purpose of our second quarter financial results, *we have assumed that the regulatory approval in the U.S. and other jurisdictions begin early in fourth quarter 2019.*”

244. When questioned about the timeline for re-certification of the 737 MAX, Defendant Muilenburg stated “[w]e’re making good steady progress on that. And we see convergence, so we know we’re making progress.” “[W]hen we say return to service early in the fourth quarter, we have to work through all of these uncertainties, the software update and the certification of the airplane itself as well as the training curriculum, as well as preparation for all of our customers to get the fleet back up and running. *And we have good understanding of each of those work flows. We know the work that has to be done. We are on it on a daily basis.*”

245. Defendant Muilenburg was then questioned by a reporter from *The Seattle Times* about the “optimistic assumptions” underlying Boeing’s timeline for returning the 737 MAX to service. Defendant Muilenburg responded that Boeing’s “current best estimate” was “*to deliver our certification package including the certification flight in that September timeframe and then return to service early in the fourth quarter. . . .* We have taken our best estimate at that and

factored that into the analysis and numbers that we shared with you today, and *we are assessing that on a daily basis and working hand in hand with the FAA in this process.*”

246. For the first time, however, Defendant Muilenburg hinted at the possibility that production for the 737 MAX could be halted altogether. Defendant Muilenburg stated:

As our efforts to support the 737 MAX's safe return to service continue, we will continue to assess our production plans. *Should our estimate of the anticipated return to service change, we might need to consider possible further rate reductions or other options, including a temporary shutdown of the MAX production.*

247. Defendant Muilenburg’s statements were a partial disclosure and partial materialization of the foreseeable risk that Defendants had previously concealed from the investing public. The 737 MAX was fundamentally unsafe and could not be fixed by way of a quick and easy change to MCAS. The news that Boeing might halt the production of the 737 MAX altogether partially revealed to the market that Defendants’ prior representations were false or materially misleading. Boeing’s stock fell nearly 7% in response over the next two days, from a closing price of \$373.07 on July 23, 2019, to a closing price of \$348.09 on July 25, 2019.

#### **M. Defendants Continue Misrepresenting the Status of the 737 MAX’s Recertification and its Return-to-Service Timeline**

248. In August 2019, the FAA and regulators from Europe, Canada, and Brazil flew to Boeing’s offices in Seattle. However, Boeing did not provide these regulators with the detailed information that Defendants had signaled to the market that Boeing was submitting to regulators. To the contrary, and as was later reported by *The New York Times*, “[t]hey were expecting to review reams of documentation describing the software update for the Max. Instead, the Boeing representatives offered a brief PowerPoint presentation, in line with what they had done in the past. The regulators left the meeting early.” According to the head of the FAA’s Aircraft

Certification Office, Earl Lawrence, “[w]e were looking for a lot more rigor in the presentation of the materials. They were not ready.”

249. Despite Boeing’s lackadaisical approach to its meeting with the FAA and other regulators, Defendant Muilenburg told investors the exact opposite during a presentation at the Morgan Stanley Laguna Conference on September 11, 2019. Defendant Muilenburg stated:

*On the 737 MAX, we’re continuing to make solid progress on return-to-service and we’re actively engaged with regulators around the world and day to day working with the FAA on a return-to-service timing. We are making good, solid progress on the software update to the airplane, versions of that final software in our integration labs and simulators being tested and we are still targeting early fourth quarter for a return-to-service of the 737 MAX.*

250. In response to a question from an analyst about Boeing’s submissions to the FAA, Defendant Muilenburg stated:

We’re working through all of those certification deliverables with the FAA. So think of that as an iterative process that includes software and training materials along with a number of other certification documents and *we have very active engagement with the FAA* and the other regulators on those documents, so still open questions that we’re working our way through. *All of that work supports our timeline for an early fourth quarter return-to-service*, but this is not a single event. There’s a number of iterations that will occur. I will say that early versions of that final software now in our test and integration labs are going through simulation testing and *all of that work is converging and supporting our return-to-service timeline*.

#### **N. Defendant Muilenburg Is Stripped as His Role as Chairman**

251. A month later, on October 11, 2019, Boeing announced that its Board of Directors had separated the roles of chairman and CEO. Defendant Muilenburg was to continue as Boeing’s CEO, while Calhoun, Boeing’s lead independent Director, was elected as non-executive Chairman. Boeing’s Board of Directors stated:

[S]plitting the chairman and CEO roles will enable Muilenburg to focus full time on running the company ***as it works to return the 737 MAX safely to service***, ensure full support to Boeing's customers around the world, and implement changes to sharpen Boeing's focus on product and services safety. ***This decision is the latest of several actions by the board of directors and Boeing senior leadership to strengthen the company's governance and safety management processes.***

#### O. Defendants' Attempt to Mislead the FAA Is Partially Revealed

252. Late in the day on October 17, 2019, Boeing provided the FAA with the instant messages between Forker and Gustavsson described in Paragraph 137. FAA Administrator Stephen Dickson wrote to Defendant Muilenburg in response, demanding to know why Boeing had withheld the documents from the FAA despite discovering them "months ago" when they were produced to the DOJ. The letter stated:

Last night, I reviewed a concerning document that Boeing provided late yesterday to the Department of Transportation. I understand that Boeing discovered the document in its files months ago. I expect your explanation immediately regarding the content of this document and Boeing's delay in disclosing the document to its safety regulator.

253. In response, Boeing acknowledged that it had provided the instant messages to the DOJ earlier in the year but claimed that it withheld them from the FAA because of the ongoing nature of the Criminal Action.

254. The next day, October 18, 2019, *The New York Times* published the instant messages in an article titled, *Boeing Pilot Complaint of 'Egregious' Issue With 737 Max in 2016*. The article revealed that ***Defendants knew in 2016 – months before the 737 MAX was certified by the FAA and years before the Lion Air and Ethiopian Airlines crashes killed 346 people – that MCAS was unsafe***. *The New York Times* noted that the instant messages "strike at Boeing's defense that it had done nothing wrong regarding the Max because regulators had cleared the plane to fly, and potentially increases the company's legal exposure as it faces civil and criminal

investigations and multiple lawsuits related to both crashes.” As explained by Weakls, “[t]his is more evidence that Boeing misled pilots, government regulators and other aviation experts about the safety of the 737 Max.”

255. Lawmakers, regulators, and pilots responded to the instant messages with swift condemnation. “***This is no longer just a regulatory failure and a culture failure. It’s starting to look like criminal misconduct.***” Senator Richard Blumenthal said he “expected answers from Boeing’s chief executive and board of directors.” “They must be held accountable if Boeing was deceptive or misleading in failing to report safety concerns,” said Blumenthal. “***What these reports indicate is that Boeing’s own employees lied and concealed the truth.***”

256. On Sunday, October 20, 2019, *The Wall Street Journal* reported that an internal Boeing survey from November 2016 revealed that “roughly one in three employees who responded felt ‘potential undue pressure’ from managers regarding safety-related approvals by federal regulators across an array of commercial planes.” “15% of those who responded encountered such situations ‘several times’ or ‘frequently.’” *The Wall Street Journal* noted that “[s]uch conflicts could be problematic, the survey found, when it came to Boeing engineers who played dual roles designing certain systems on behalf of the plane marker and then certifying the same systems as safe on behalf of the Federal Aviation Administration . . .”

257. *The New York Times* and *The Wall Street Journal* articles were a partial disclosure and partial materialization of the foreseeable risk that Defendants had previously concealed from the investing public. The 737 MAX was fundamentally unsafe and had been certified based on incorrect facts about MCAS. *The New York Times* and *The Wall Street Journal* articles partially revealed to the market that Defendants’ prior representations were false or materially misleading.

Boeing's stock declined **more than 10%** in response, from a closing price of \$369.06 on October 17, 2019, to a closing price of \$331.06 on October 21, 2019.

**P. Defendants Are Lambasted by Congressional Leaders for a Corporate Culture that Put "Profits Before People's Lives"**

258. On October 29, 2019, Defendant Muilenburg and BCA Chief Engineer Hamilton testified before the Senate Commerce, Science, and Transportation Committee in a hearing titled, *Aviation Safety and the Future of Boeing's 737 MAX*. During the hearing, Senator Ted Cruz lambasted Defendant Muilenburg and the "culture at Boeing" for not taking action to protect the flying public after the Company produced the instant messages between Forker and Gustavsson to the DOJ in February. He stated:

[The instant message] exchange describes what happened in Lion Air and Ethiopian Air. The men and women who are gathered here with the photos of your loved ones - 346 people are dead because what these chief pilots described as "egregious" and "crazy," – that's their language. That's Boeing's internal language in this exchange. *Now what I find truly stunning - Boeing handed this exchange over to the Department of Justice in February. In March, I chaired a hearing of the aviation subcommittee on these two crashes. Boeing did not see fit to give this committee that exchange. Nor did Boeing give it to the FAA or the Department of Transportation. But what I find most stunning is your testimony here today that you say you first learned of this exchange a couple of weeks ago. These are senior leaders at Boeing in an exchange saying and I will quote again, "so I basically lied to the regulators."* . . .

*You're the CEO - the buck stops with you. Did you read this document? And how did your team not put it in front of you? Run in with their hair on fire saying "We've got a real problem here?" How did that not happen? And what does that say about the culture at Boeing if they didn't give it to you? . . . How did you not in February set out a nine alarm fire to say "We need to figure out exactly what happened, not after all the hearings, not after the pressure, but because 346 people have died and we don't another person to die?"*

259. Defendant Muilenburg later clarified that he learned about the instant message exchange “prior to the second crash” – *at least seven months prior.*

260. Senator Tammy Duckworth, among others, chastised Defendant Muilenburg for Boeing’s decision to remove all references to MCAS from the 737 MAX’s FCOM despite knowing that it was unsafe. She stated:

Time and time again, Boeing has not told the whole truth to this committee and the families of lost loved ones. *You set those pilots up for failure. You knew in 2016 that this was happening and your team at Boeing decided not to fix it because of “well understood piloting techniques and procedures.” The problem is that you added something else – you put in a system and you didn’t tell pilots about it.* Boeing is the company that built the flying fortress that saved Europe – a historic aircraft that rescued the free world and yet, *you knew about these problems and you continued to put the system into place. You’ve not told us the whole truth* and these families are suffering because of it.

261. Senator Richard Blumenthal similarly remarked:

These loved ones lost lives because of an accident that was not only preventable, *but was the result of a pattern of deliberate concealment . . .*

Boeing came to my office shortly after these crashes and said they were the result of pilot error. Those pilots never had a chance . . . Those loved ones never had a chance. *They were in flying coffins as a result of Boeing deciding that it was going to conceal MCAS from the pilots.*

262. The next day, October 30, 2019, Defendant Muilenburg and BCA Chief Engineer Hamilton appeared before the House Transportation and Infrastructure Committee. Like the Senate Committee members, the House Committee members criticized Defendant Muilenburg for Boeing’s corporate culture and tone at the top. As stated by Representative Jesus Garcia, “[i]t is pretty clear that there has been a culture of greed and compromising safety at Boeing.” According to Representative Colin Allred, “[i]t’s the purposeful concealment that bothers so many of us, with an obvious financial drive behind it.” Representative Gregory Stanton called

out the “*top brass at Boeing [for] too often put[ting] . . . profit before people’s lives.*” As summarized by Representative Debbie Mucarsel-Powell, “this is a story about a company cutting corners, taking shortcuts, sacrificing safety to achieve maximum profits.”

**Q. FAA Administrator Dickson Contacts Congress Regarding the Falsity of Defendant Muilenburg’s Statements**

263. Desperate to allay investor concerns about the 737 MAX’s return to service, Defendant Muilenburg contacted FAA Administrator Dickson in early November “to ask whether he would consider allowing the company to begin delivering airplanes before they were cleared to fly.” As later reported by *The New York Times*, Dickson “said he would look into it but made no commitments.”

264. Despite FAA Administrator Dickson’s noncommittal, Boeing issued a press release a few days later, on November 11, 2019, announcing that the FAA could re-certify the 737 MAX within the next month and that Boeing would resume delivering airplanes to its customers in December. The press release was titled, *737 MAX Progress Report*, and stated, in relevant part:

*We are working closely with the FAA and other regulatory authorities as we work towards certification and safe return to commercial service, and we are taking the time to answer all of their questions.* With the rigorous scrutiny being applied, we are confident the MAX will be one of the safest airplanes ever to fly.

While the FAA and other regulatory authorities will determine the timing of certification and return to commercial service, *Boeing continues to target FAA certification of the MAX flight control software updates during this quarter. Based on this schedule, it is possible that the resumption of MAX deliveries to airline customers could begin in December, after certification, when the FAA issues an Airworthiness Directive rescinding the grounding order.* In parallel, we are working towards final validation of the updated training requirements, which must occur before the MAX returns to commercial service, and which we now expect to begin in January. . . .

*At each step of this process Boeing has worked closely with the FAA and other regulators.* We’re providing detailed

documentation, had them fly in the simulators, and helped them understand our logic and the design for the new procedures, software and proposed training material to ensure that they are completely satisfied as to the airplane's safety.

265. As later reported by *The New York Times*, FAA Administrator Dickson "told his colleagues that he had not agreed to [Defendant Muilenburg's] timeline and felt as though he was being manipulated . . ."

266. The FAA immediately demanded a meeting with Defendant Muilenburg to address Defendants' false claims that the 737 MAX would be re-certified and returned to service by the end of the year. As reported by *The New York Times*, on December 12, 2019, FAA Administrator Dickson met with Defendant Muilenburg and "**reprimanded [him] for putting pressure on the agency to move faster in approving the return of the company's 737 Max jet.**" *USA Today* reported that Dickson "chastised Muilenburg **for suggesting the plane would be recertified this year.**"

267. The FAA went as far as to e-mail Congressional staff explaining the falsity of Boeing's repeated representations to its customers and investors about when the 737 MAX's return-to-service timeline. As reported by *Reuters*, FAA Administrator Dickson stated that he was:

***concerned that Boeing continues to pursue a return-to-service schedule that is not realistic due to delays that have accumulated for a variety of reasons. More concerning, the administrator wants to directly address the perception that some of Boeing's public statements have been designed to force FAA into taking quicker action.***

268. After Defendant Muilenburg's meeting with FAA Administrator Dickson, Boeing released a statement clarifying that the 737 MAX would not be returned to service until 2020.

**R. Boeing Halts Production of the 737 MAX**

269. A few days later, on December 16, 2019, Boeing released a statement “Regarding 737 MAX Production.” Boeing announced:

Throughout the grounding of the 737 MAX, Boeing has continued to build new airplanes and there are now approximately 400 airplanes in storage. We have previously stated that we would continually evaluate our production plans should the MAX grounding continue longer than we expected. As a result of this ongoing evaluation, ***we have decided to prioritize the delivery of stored aircraft and temporarily suspend production on the 737 program beginning next month.***

270. Boeing’s statement was a partial disclosure and partial materialization of the foreseeable risk that Defendants had previously concealed from the investing public. The 737 MAX was fundamentally unsafe and could not be fixed by way of a quick and easy change to MCAS. The news that Boeing was halting its production of the 737 MAX revealed to the market that Defendants’ prior representations were false or materially misleading. Boeing’s stock declined more than 3% in response to this news, from a closing price of \$341.67 on December 13, 2019, to a closing price of \$327.00 on December 16, 2019.

271. On December 23, 2019, Boeing announced that Defendant Muilenburg had “resigned from his positions as Chief Executive Officer and Board director effective immediately.” Calhoun was named as Boeing’s new CEO, effective January 13, 2020, and Defendant Smith was appointed as CEO in the interim. The press release made clear that Defendant Muilenburg’s departure was the result of his repeated lies to regulators and Boeing’s customers and investors, and the improper tone at the top that he created at the Company:

***The Board of Directors decided that a change in leadership was necessary to restore confidence in the Company moving forward as it works to repair relationships with regulators, customers, and all other stakeholders.***

Under the Company's new leadership, ***Boeing will operate with a renewed commitment to full transparency***, including effective and proactive communication with the FAA, other global regulators and its customers.

272. On January 7, 2020, Boeing finally admitted that full flight simulator training was necessary for all pilots to safely operate the 737 MAX. In a statement titled, *737 MAX Simulator Training*, Defendant Smith stated, “[p]ublic, customer and stakeholder confidence in the 737 MAX is critically important to us and with that focus Boeing has decided to recommend MAX simulator training combined with computer-based training for all pilots prior to returning the MAX safely to service.”

273. Two days later, on January 9, 2020, Boeing provided Congress with the emails and instant messages described in Paragraphs 131-136, among others. As reported by *The New York Times*, the documents reveal that “Boeing employees mocked federal rules, talked about deceiving regulators and joked about potential flaws in the 737 Max as it was being developed . . . .” Representative DeFazio described the documents as “incredibly damning” and “paint a deeply disturbing picture of the lengths Boeing was apparently willing to go in order to evade scrutiny from regulators, flight crews, and the flying public, even as its own employees were sounding alarms internally.” Senator Blumenthal similarly characterized the exchanges as “astonishing and appalling.”

274. On March 5, 2020, *The New York Times* published an interview with Calhoun. In the interview, Calhoun “criticized [Defendant Muilenburg] in blunt terms and said he was focused on transforming the internal culture of a company mired in crisis after two crashes killed 346 people.” “It’s more than I imagined it would be, honestly,” Calhoun said. “***And it speaks to the weaknesses of our leadership.***” Calhoun also said that Defendant Muilenburg “***turbocharged Boeing’s production rates before the supply chain was ready, a move that sent Boeing shares to***

*an all-time high but compromised quality.*" Calhoun went on, "*I'll never be able to judge what motivated [Defendant Muilenburg], whether it was a stock price that was going to continue to go up and up, or whether it was just beating the other guy to the next rate increase.*" "*If anybody ran over the rainbow for the pot of gold on stock, it would have been him.*"

**S. The House Committee Releases a Scathing Report on Boeing**

275. Six months later, on September 16, 2020, the House Committee on Transportation and Infrastructure released its final report, *The Design, Development & Certification of the Boeing 737 MAX*. According to the House Committee Report, its investigation revealed "several unmistakable facts":

The MAX crashes were not the result of a singular failure, technical mistake, or mismanaged event. *They were the horrific culmination of a series of faulty technical assumptions by Boeing's engineers, a lack of transparency on the part of Boeing's management, and grossly insufficient oversight by the FAA . . . The facts laid out in this report document a disturbing pattern of technical miscalculations and troubling management misjudgments made by Boeing.*

**T. The Senate Committee Reveals that Boeing Tried to Cover Up Important Information Relating to the Lion Air and Ethiopian Airlines Crashes**

276. On December 18, 2020, the Senate Committee on Commerce, Science, & Transportation issued its Committee Investigation Report, *Aviation Safety Oversight*. The Senate Committee Report found that "*Boeing inappropriately influenced FAA human factor simulator testing* of pilot reaction times involving a [MCAS] system failure." The Committee concluded that:

*Boeing officials involved in the conduct of this test had established a pre-determined outcome to reaffirm a long-held human factor assumption related to pilot reaction time to a runaway stabilizer. Boeing officials inappropriately coached test pilots in the MCAS simulator testing contrary to testing protocol. This test took place over a year after the second 737 MAX crash and during recertification efforts. It appears, in this instance, FAA and*

*Boeing were attempting to cover up important information that may have contributed to the 737 MAX tragedies.*

**U. Boeing Enters into a Deferred Prosecution Agreement, Admitting that it Conspired to Defraud the FAA**

277. On January 6, 2021, Boeing entered into the DPA in the Criminal Action. As the DOJ explained in a press release issued the next day, January 7, 2021, Boeing agreed to pay more than \$2.5 billion “to resolve a criminal charge related to a conspiracy to defraud the [FAA’s] Aircraft Evaluation Group (FAA AEG) in connection with the FAA AEG’s evaluation of Boeing’s 737 MAX airplane.” Boeing also agreed to implement significant remedial measures, including changes to its regulatory compliance program and internal controls.

278. According to Acting Assistant Attorney General David P. Burns, “[t]he tragic crashes of Lion Air Flight 610 and Ethiopian Airlines Flight 302 *exposed fraudulent and deceptive conduct* by employees of one of the world’s leading commercial airplane manufacturers.” “*Boeing’s employees chose the path of profit over candor by concealing material information from the FAA concerning the operation of its 737 Max airplane and engaging in an effort to cover up their deception.*” The DPA holds “*Boeing and its employees accountable for their lack of candor with the FAA regarding MCAS.*”

279. By entering into the DPA, Boeing made clear that it:

*[A]dmits, accepts, and acknowledges that it is responsible under United States law for the acts of its officers, directors, employees, and agents as charged in the Information, and as set forth in the Statement of Facts, and that the allegations described in the Information and the facts described in the Statement of Facts are true and accurate.*

280. Boeing also “*expressly agrees that it shall not*, through present or future attorneys, officers, directors, employees, agents, or any other person authorized to speak for the Company *make any public statement, in litigation or otherwise, contradicting the acceptance of*

*responsibility by the Company set forth above or the facts described in the attached Statement of Facts.”*

281. In the DPA and its accompanying Statement of Facts, Boeing admitted that it “through [Forkner and Gustavsson], *knowingly, and with intent to defraud, conspired to defraud the FAA AEG . . . in order to bring about a financial gain to Boeing . . .*” Specifically, Boeing admitted that it knew that “the FAA AEG’s provisional ‘Level B’ differences-training determination had been based in part on outdated and inaccurate information about MCAS.” Despite this knowledge, Boeing admitted that it “*intentionally withheld and concealed from the FAA its knowledge of MCAS’s expanded operational scope.*” Boeing also admitted that it made “*misleading statements to the FAA AEG about MCAS,* and in reliance on those statements and omissions, the FAA AEG agreed to delete all information about MCAS from the 737 MAX FSB Report.” Finally, Boeing admitted that, because of its “intentional withholding of information from the FAA AEG, the final version of the 737 MAX FSB Report lacked information about MCAS, and *relevant portions of this 737 MAX FSB Report were materially false, inaccurate, and incomplete.* In turn, airplane manuals and pilot-training materials for U.S.-based airlines lacked information about MCAS, and relevant portions of these manuals and materials were similarly false, inaccurate, and incomplete as a result.” Forkner was later indicted for his involvement in Boeing’s conspiracy to defraud the FAA.

#### **V. The FAA Fines Boeing For Its Continued Regulatory Noncompliance**

282. On February 25, 2021, the FAA announced that it had assessed an additional \$5.4 million in penalties against Boeing for failing to meet its obligations under the Settlement Agreement. Boeing also agreed to pay an additional \$1.21 million to settle two pending enforcement cases against the Company, for a total of \$6.6 million. As FAA Administrator Dickson explained in a press release, “Boeing failed to meet all of its obligations under the

settlement agreement, and the FAA is holding Boeing accountable by impossible additional penalties.” “*I have reiterated to Boeing’s leadership time and time again that the company must prioritize safety and regulatory compliance*, and that the FAA will always put safety first in all its decisions.”

283. According to the FAA, “Boeing’s ongoing and planned corrective actions and cure plans have not been effective in remedying th[e] performance deficiencies” in five of the twelve focus areas in the Settlement Agreement. “*In some of these areas, Boeing’s performance regressed, despite planned and implemented corrective actions and cure plans.*” With respect to Boeing’s regulatory compliance, in particular, the FAA found Boeing’s shortfalls to be “*numerous, varied, and called into question Boeing’s performance under several other sections of the [Settlement] Agreement.*”

284. The FAA’s announcement and assessment of \$5.4 million in penalties against Boeing was a partial disclosure and a partial materialization of the foreseeable risk that Defendants had previously concealed from the investing public. The 737 MAX was certified based on incorrect facts about MCAS and Boeing was not in compliance with all applicable FAA regulations. The news that the FAA was assessing additional penalties against Boeing for failing to meet its obligations under the Settlement Agreement and comply with the applicable FAA regulations revealed to the market that Defendants’ prior representations were false or materially misleading. Boeing stock declined ***nearly 6%*** in response to the news, from a closing price of \$229.34 on February 24, 2021, to a closing price of \$216.45 on February 25, 2021.

### **XVIII. Additional Facts About Defendants’ Fraud Are Still Being Revealed**

285. Since February 2021, more facts about Defendants’ fraud have been publicly disclosed. For example, on June 16, 2021, the FAA issued a directive requiring 737 MAX operators to conduct additional inspections of the airplane’s automated flight control system.

According to the FAA, the directive was necessary because a “potential latent failure of a flight control function” if combined with “unusual flight maneuvers or with another flight control system failure” could result in a lack of control over the airplane.

286. On January 21, 2022, a documentary, *Downfall: The Case Against Boeing* premiered virtually at the Sundance Film Festival. It was released on Netflix on February 18, 2022. The documentary reveals new facts about Defendants’ fraud and details the events leading up to the crashes of Lion Air flight 610 and Ethiopian Airlines flight 302.

287. Then, on March 21, 2022, as reported by *The Seattle Times*, the FAA informed Boeing that it was unlikely that the agency would certify the 737 MAX 10 – the final airplane in the MAX family – before the end of 2022. “The FAA letter casts doubt on Boeing’s publicly stated timelines for certifying both the MAX 10 and the 777-9X jets, and it asks the plane maker to provide updated schedules for both programs.” If the 737 MAX 10 is not certified by the end of 2022, the airplane must meet new cockpit alerting requirements set forth in the Aircraft Certification Reform and Accountability Act, passed in response to the Lion Air and Ethiopian Airlines crashes. If the airplane is not certified and Congress does not grant Boeing an extension, the Company will be faced with “a scenario that could kill the MAX 10 program.”

288. A few months later, on July 7, 2022, Calhoun confirmed in an interview with *Aviation Week* that Boeing could be forced to cancel the 737 MAX 10 program if the airplane is not certified by the FAA by the end of the year.

### **DEFENDANTS’ FALSE AND MISLEADING STATEMENTS AND OMISSIONS**

#### **I. Defendants’ False and Misleading Statements About the 737 MAX’s Safety, Certification, and Return-to-Service Timeline**

289. On February 16, 2018, Boeing reported that the FAA had certified the 737 MAX 9 for commercial flight. Boeing stated that, “[t]he FAA certification affirms that the airplane’s

*handling, systems and overall performance all comply with required aviation regulations.” “Our teams built superior capabilities into the MAX 9 and proved them all the way through flight test,”* said Keith Leverkuhn, Vice President and General Manager of the 737 MAX program. Boeing again reaffirmed that the “*737 MAX family is designed to offer customers exceptional performance*, with lower per-seat costs and an extended range that is opening up new destinations in the single-aisle market. The 737 MAX incorporates the latest CFM International LEAP-1B engines, Advanced Technology winglets, Boeing Sky Interior, large flight deck displays *and other features to deliver the highest efficiency, reliability and passenger comfort in the single-aisle market.*”

290. On March 16, 2018, Boeing announced that the 737 MAX 7 successfully completed its first flight. “*Everything we saw during today's flight shows that the MAX 7 is performing exactly as designed,*” said Leverkuhn. Boeing again represented to the market that the “737 MAX family incorporates the latest CFM International LEAP-1B engines, Advanced Technology winglets, Boeing Sky Interior, large flight deck displays *and other features to deliver the highest efficiency, reliability and passenger comfort in the single-aisle market.*”

291. These statements were materially false and misleading. It was materially misleading for Defendants to tout the certification of the 737 MAX when, in fact, they had defrauded the FAA into certifying the 737 MAX based on incorrect information. It was also materially misleading for Defendants to represent that the 737 MAX was safe, reliable, and a superior aircraft when the precise opposite was true. Among other things: (1) MCAS was susceptible to a single point of failure, which was contrary to industry norms, federal regulations, and the Company’s own historical practices; (2) Defendants made fundamental and deadly changes to MCAS that greatly expanded its scope and the circumstances under which it could

activate; (3) Defendants concealed these changes from the FAA, which led to the FAA certifying the 737 MAX and recommending Level B differences training based on incorrect facts about MCAS; (4) Defendants knew in August 2017 that the AOA Disagree Alert was inoperable on 80% of the 737 MAX airplanes that it had delivered so far, but decided to wait until 2020 to fix the AOA Disagree Alert, producing and delivering 737 MAX airplanes with inoperable AOA Disagree Alerts in the meantime; (5) Defendants misled the FAA into removing all references to MCAS from the 737 MAX's FCOM despite knowing that the process of overriding MCAS was complex and could result in “catastrophic” consequences if not performed quickly enough, and that it had taken one of Boeing’s test pilots more than 10 seconds to identify and disable MCAS; (6) Defendants did not disclose MCAS to pilots, train them on it, or explain how to deactivate it in the 737 MAX’s FCOM; (7) MCAS was an entirely new system that had never been used on one of Boeing’s commercial airplanes before; (8) MCAS could not be disabled in the same way that the automatic flight systems on all other Boeing airplanes could be disabled; and (9) Boeing employees raised significant concerns about the safety of the 737 MAX.

292. On November 7, 2018, Boeing issued a press release with preliminary details from the Indonesian NTSC’s investigation. The Indonesian NTSC “indicated that Lion Air flight 610 experienced erroneous input from one of its AOA (Angle of Attack) sensors.” As a result, Boeing disclosed that it had released an “Operations Manual Bulletin (OMB) **directing operators to existing flight crew procedures to address circumstances where there is an erroneous input from an AOA sensor.**”

293. The OMB or November 6 Bulletin stated, in relevant part:

#### **Background Information**

The Indonesian National Transportation Safety Committee has indicated that Lion Air flight 610 experienced erroneous AOA data. Boeing would like to call attention to an AOA failure condition that

can occur during **manual flight only**. *This bulletin directs flight crews to existing procedures to address this condition.*

In the event of erroneous AOA data, the pitch trim system can trim the stabilizer nose down in increments lasting up to 10 seconds. The nose down stabilizer trim movement can be stopped and reversed with the use of the electric stabilizer trim switches but may restart 5 seconds after the electric stabilizer trim switches are released. Repetitive cycles of Uncommanded nose down stabilizer continue to occur unless the stabilizer trim system is deactivated . . . .

### **Operating Instructions**

In the event an uncommanded nose down stabilizer trim is experienced on the 737-8/-9, in conjunction with one or more of the above indications or effects, do the Runaway Stabilizer NNC ensuring that the STAB TRIM CUTOUT switches are set to CUTOUT and stay in the CUTOUT position for the remainder of the flight.

294. The November 6 Bulletin did not disclose that Boeing had installed a brand-new “pitch trim system” in the 737 MAX – MCAS – that operated differently than any other trim system on a 737 airplane. To the contrary, the November 6 Bulletin directed flight crews to “existing procedures to address this condition” – effectively pointing the finger at the Lion Air pilots and blaming them for the crash.

295. These statements were materially false and misleading. It was misleading for Defendants to direct flight crews to existing procedures when those procedures were woefully insufficient to address MCAS. Among other things: (1) Defendants did not disclose MCAS to pilots, train them on it, or explain how to deactivate it in the 737 MAX’s FCOM; (2) MCAS was an entirely new system that had never been used on one of Boeing’s commercial airplanes before; and (3) MCAS could not be disabled in the same way that the automatic flight systems on all other Boeing airplanes could be disabled.

296. On November 13, 2018, Boeing issued a statement that it was “deeply saddened” by the Lion Air crash and was working with officials to determine what exactly went wrong. “We

are taking every measure to fully understand all aspects of this incident, working closely with the investigating team and all regulatory authorities involved," Boeing spokesperson Paul Bergman said. "**We are confident in the safety of the 737 MAX. Safety remains our top priority and is a core value for everyone at Boeing.**"

297. That same day, Defendant Muilenburg sat down for an interview with Fox News. During the interview, Defendant Muilenburg falsely stated:

The bottom line here is **the 737 MAX is safe and safety is a core value** for us at Boeing and it always has been and we ensure that our airplanes are safe . . .

[T]here were some indications of an inaccurate angle of attack signal that was being sent to the airplane and of course our airplane has the ability to handle that **with procedures in place** and we've already issued a couple of additional bulletins to our operators and pilots around the world that point them back to **existing flight procedures to handle that kind of condition**. . . .

Again, we ensure that **we provide all of the information that is needed to safely fly our airplanes** . . .

**[T]he bottom line here is that the 737 MAX is a very safe airplane and we're very confident in that.**

298. Defendant Muilenburg also misrepresented that it was pilot error – not MCAS – that caused the Lion Air crash. In response to a question about whether the Lion Air crash was the result of "a new system that wasn't disclosed to pilots," Defendant Muilenburg unequivocally stated:

**No.** There are new systems on the airplane that are designed to take advantage of the capabilities of the airplane and provide control capability in high angle of attack conditions and **those systems operate properly and again in certain failure modes if there is an inaccurate angle of attack sensor feeding information to the airplane there is a procedure to handle that**. . . . We're going to make sure that we're providing all the information necessary and appropriate training, and go back to the core value here . . . **The airplane is safe. We know how to fly it safely.** And we're very confident in that. . . .

299. When asked whether Boeing provided “information in terms of what to do should something change, was that information available to the pilots? Did they know how to operate it? Should the nose be in a different position?” Defendant Muilenburg again stated: “[y]eah, in fact *that's part of the training manual. It's an existing procedure. So the bulletin we put out again last weekend, over the weekend, pointed to that existing flight procedure.*”

300. These statements were materially false and misleading. It was materially misleading for Defendants to tell the market that the 737 MAX was safe when the precise opposite was true. It was also materially misleading for Defendants to direct flight crews to existing procedures when those procedures were woefully insufficient to address MCAS. Among other things: (1) MCAS was susceptible to a single point of failure, which was contrary to industry norms, federal regulations, and the Company’s own historical practices; (2) Defendants made fundamental and deadly changes to MCAS that greatly expanded its scope and the circumstances under which it could activate; (3) Defendants concealed these changes from the FAA, which led to the FAA certifying the 737 MAX and recommending Level B differences training based on incorrect facts about MCAS; (4) Defendants knew in August 2017 that the AOA Disagree Alert was inoperable on 80% of the 737 MAX airplanes that it had delivered so far, but decided to wait until 2020 to fix the AOA Disagree Alert, producing and delivering 737 MAX airplanes with inoperable AOA Disagree Alerts in the meantime; (5) Defendants misled the FAA into removing all references to MCAS from the 737 MAX’s FCOM despite knowing that the process of overriding MCAS was complex and could result in “catastrophic” consequences if not performed quickly enough, and that it had taken one of Boeing’s test pilots more than 10 seconds to identify and disable MCAS; (6) Defendants did not disclose MCAS to pilots, train them on it, or explain how to deactivate it in the 737 MAX’s FCOM; (7) MCAS was an entirely new system that had

never been used on one of Boeing’s commercial airplanes before; (8) MCAS could not be disabled in the same way that the automatic flight systems on all other Boeing airplanes could be disabled; (9) Boeing employees raised significant concerns about the safety of the 737 MAX; (10) Defendants knew MCAS had caused the Lion Air crash; and (11) Defendants knew that the assumptions on which Boeing had based its four second reaction time estimate were flawed.

301. On November 19, 2018, Boeing scheduled, and then cancelled, a conference call with its customers to reassure them about the safety of the 737 MAX. Instead, Boeing announced that it would hold a series of regional meetings to answer questions about the airplane.

302. That same day, Defendant Muilenburg sent an e-mail to all Boeing employees, but intended for the public domain. As reported by *The Seattle Times*, Defendant Muilenburg’s email sought to counter the supposedly “false assumptions” and purported “speculation” in the media regarding the Lion Air crash. In his e-mail, Defendant Muilenburg repeated that “***the 737 MAX is a safe airplane*** designed, built and supported by skilled men and women . . .” Defendant Muilenburg also “***disputed specific reports in some media related to [MCAS]***” and “***specifically denied reports in some media outlets that the procedure pilots need to deal with such uncommanded movements was not in the 737 pilot manual and that pilots were not trained on how to handle it.***” “***That’s simply untrue,***” he said. Defendant Muilenburg’s email concluded by stating that Boeing would not debate the details of the Lion Air crash in the media so as to not “violate the integrity of the investigation.”

303. A few days later, on November 21, 2018, Boeing issued a press release titled, *Statement on Lion Air Flight JT 610 Investigation*. In the press release, Boeing again assured the market that “[w]e are confident in the safety of the 737 MAX. Safety remains our top priority and is a core value for everyone at Boeing.” Boeing also reiterated that, “[w]hile we can’t discuss

the specifics of an on-going investigation, we have provided two updates for our operators around the world that *re-emphasize existing procedures for these situations.*”

304. On November 27, 2018, in response to the release of the Indonesian NTSC’s preliminary accident report, Boeing issued a press release again emphasizing that:

*Safety is a core value for everyone at Boeing and the safety of our airplanes, our customers’ passengers and their crews is always our top priority.* As our customers and their passengers continue to fly the 737 MAX to hundreds of destinations around the world every day, *they have our assurance that the 737 MAX is as safe as any airplane that has ever flown the skies.*

305. Boeing also suggested that pilot error – rather than MCAS – was to blame for the Lion Air crash. The press release described how the pilots on the October 28, 2018 Lion Air flight “turned off the stabilizer trim switches within minutes of experiencing the automatic nose down trim, and continued with manual trim through the end of the flight. . . . [T]he remainder of the Oct. 28 flight was uneventful and . . . the flight continued to its destination.” Boeing pointed out that, “[u]nlike as is stated with respect to the prior flight, the [NTSC] report does not state whether the pilots performed the runaway stabilizer procedure or cut out the stabilizer trim switches.”

306. These statements were materially false and misleading. It was materially misleading for Defendants to tell the market that the 737 MAX was safe when the precise opposite was true. It was also materially misleading for Defendants to direct flight crews to existing procedures when those procedures were woefully insufficient to address MCAS. Among other things: (1) MCAS was susceptible to a single point of failure, which was contrary to industry norms, federal regulations, and the Company’s own historical practices; (2) Defendants made fundamental and deadly changes to MCAS that greatly expanded its scope and the circumstances under which it could activate; (3) Defendants concealed these changes from the FAA, which led to the FAA certifying the 737 MAX and recommending Level B differences training based on

incorrect facts about MCAS; (4) Defendants knew in August 2017 that the AOA Disagree Alert was inoperable on 80% of the 737 MAX airplanes that it had delivered so far, but decided to wait until 2020 to fix the AOA Disagree Alert, producing and delivering 737 MAX airplanes with inoperable AOA Disagree Alerts in the meantime; (5) Defendants misled the FAA into removing all references to MCAS from the 737 MAX's FCOM despite knowing that the process of overriding MCAS was complex and could result in “catastrophic” consequences if not performed quickly enough, and that it had taken one of Boeing’s test pilots more than 10 seconds to identify and disable MCAS; (6) Defendants did not disclose MCAS to pilots, train them on it, or explain how to deactivate it in the 737 MAX’s FCOM; (7) MCAS was an entirely new system that had never been used on one of Boeing’s commercial airplanes before; (8) MCAS could not be disabled in the same way that the automatic flight systems on all other Boeing airplanes could be disabled; (9) Boeing employees raised significant concerns about the safety of the 737 MAX; (10) Defendants knew MCAS had caused the Lion Air crash; (11) Defendants knew that the assumptions on which Boeing had based its four second reaction time estimate were flawed; (12) Defendants had requested permission from the FAA to update the 737 MAX’s FCOM to include references to MCAS and suggested that pilots receive Level D differences training on the 737 MAX using a full-flight simulator; and (13) Defendants were updating MCAS to make it safer.

307. On November 29, 2018, Boeing repeated the Company line to *The Washington Post*, promising that its customers and their passengers “***have our assurance that the 737 Max is as safe as any airplane that has ever flown the skies.***”

308. On December 7, 2018, Defendant Muilenburg gave an interview with CNBC. During the interview, Defendant Muilenburg stated:

Part of what we wanted to accomplish was seamless training and introduction for our customers, so ***we purposely designed the***

*airplane to behave in the same way.* So even though it's a different airplane design, the control laws that fly the airplane are designed to make the airplane *behave the same way in the hands of the pilot.*

These statements were materially false and misleading. It was materially misleading for Defendants to tell the market that the 737 MAX was safe when the precise opposite was true. It was also materially misleading for Defendants to represent that the 737 MAX behaved in the same way as its prior commercial airplanes. Among other things: (1) MCAS was susceptible to a single point of failure, which was contrary to industry norms, federal regulations, and the Company's own historical practices; (2) Defendants made fundamental and deadly changes to MCAS that greatly expanded its scope and the circumstances under which it could activate; (3) Defendants concealed these changes from the FAA, which led to the FAA certifying the 737 MAX and recommending Level B differences training based on incorrect facts about MCAS; (4) Defendants knew in August 2017 that the AOA Disagree Alert was inoperable on 80% of the 737 MAX airplanes that it had delivered so far, but decided to wait until 2020 to fix the AOA Disagree Alert, producing and delivering 737 MAX airplanes with inoperable AOA Disagree Alerts in the meantime; (5) Defendants misled the FAA into removing all references to MCAS from the 737 MAX's FCOM despite knowing that the process of overriding MCAS was complex and could result in "catastrophic" consequences if not performed quickly enough, and that it had taken one of Boeing's test pilots more than 10 seconds to identify and disable MCAS; (6) Defendants did not disclose MCAS to pilots, train them on it, or explain how to deactivate it in the 737 MAX's FCOM; (7) MCAS was an entirely new system that had never been used on one of Boeing's commercial airplanes before; (8) MCAS could not be disabled in the same way that the automatic flight systems on all other Boeing airplanes could be disabled; (9) Boeing employees raised significant concerns about the safety of the 737 MAX; (10) Defendants knew MCAS had caused the Lion Air crash; (11) Defendants knew that the assumptions on which Boeing had based its four

second reaction time estimate were flawed; (12) Defendants had requested permission from the FAA to update the 737 MAX's FCOM to include references to MCAS and suggested that pilots receive Level D differences training on the 737 MAX using a full-flight simulator; and (13) Defendants were updating MCAS to make it safer.

309. On February 6, 2019, Defendant Smith participated in a question-and-answer segment during the 40th Annual Cowen Aerospace and Defense Conference. When asked whether Boeing was concerned about the certification process for the remaining airplanes in the 737 MAX family, Defendant Smith stated:

*Look, certification is a big part of any development program. But I'd like to think we get well ahead of that and obviously working our way through 737 and all the derivatives of the 737 MAX, the 787 and those derivatives and certifying the last one being 787-10.. . So, I think we got a good plan in place. I wouldn't tell you that we see anything that's been outside the norm of what we've normally been through in our certification of our other aircraft.*

310. These statements were materially false and misleading. It was materially misleading for Defendants to characterize the certification of the 737 MAX as normal when, in fact, they had defrauded the FAA into certifying the 737 MAX based on incorrect information. Among other things: (1) MCAS was susceptible to a single point of failure, which was contrary to industry norms, federal regulations, and the Company's own historical practices; (2) Defendants made fundamental and deadly changes to MCAS that greatly expanded its scope and the circumstances under which it could activate; (3) Defendants concealed these changes from the FAA, which led to the FAA certifying the 737 MAX and recommending Level B differences training based on incorrect facts about MCAS; (4) Defendants knew in August 2017 that the AOA Disagree Alert was inoperable on 80% of the 737 MAX airplanes that it had delivered so far, but decided to wait until 2020 to fix the AOA Disagree Alert, producing and delivering 737 MAX airplanes with inoperable AOA Disagree Alerts in the meantime; (5) Defendants misled the FAA

into removing all references to MCAS from the 737 MAX's FCOM despite knowing that the process of overriding MCAS was complex and could result in “catastrophic” consequences if not performed quickly enough, and that it had taken one of Boeing’s test pilots more than 10 seconds to identify and disable MCAS; (6) Defendants did not disclose MCAS to pilots, train them on it, or explain how to deactivate it in the 737 MAX’s FCOM; (7) MCAS was an entirely new system that had never been used on one of Boeing’s commercial airplanes before; (8) MCAS could not be disabled in the same way that the automatic flight systems on all other Boeing airplanes could be disabled; (9) Boeing employees raised significant concerns about the safety of the 737 MAX; (10) Defendants knew MCAS had caused the Lion Air crash; (11) Defendants knew that the assumptions on which Boeing had based its four second reaction time estimate were flawed; (12) Defendants had requested permission from the FAA to update the 737 MAX’s FCOM to include references to MCAS and suggested that pilots receive Level D differences training on the 737 MAX using a full-flight simulator; and (13) Defendants were updating MCAS to make it safer.

311. On March 11, 2019, Boeing issued a *Statement on 737 MAX Software Enhancement*, which stated, in relevant part:

*Safety is a core value for everyone at Boeing and the safety of our airplanes, our customers’ passengers and their crews is always our top priority. The 737 MAX is a safe airplane that was designed, built and supported by our skilled employees who approach their work with the utmost integrity.*

For the past several months and in the aftermath of Lion Air Flight 610, Boeing has been developing a flight control software enhancement for the 737 MAX, *designed to make an already safe aircraft even safer. . .*

A pitch augmentation control law (MCAS) was implemented on the 737 MAX to improve aircraft handling characteristics and decrease pitch-up tendency at elevated angles of attack. *It was put through flight testing as part of the certification process prior to the airplane entering service. MCAS does not control the airplane in*

*normal flight; it improves the behavior of the airplane in a non-normal part of the operating envelope.*

*Boeing's 737 MAX Flight Crew Operations Manual (FCOM) already outlines an existing procedure to safely handle the unlikely event of erroneous data coming from an angle of attack (AOA) sensor. The pilot will always be able to override the flight control law using electric trim or manual trim.* In addition, it can be controlled through the use of the existing runaway stabilizer procedure as reinforced in the Operations Manual Bulletin (OMB) issued on Nov. 6, 2018.

312. The next day, March 12, 2019, Boeing issued another *Statement of 737 MAX Operation*, which stated:

***Safety is Boeing's number one priority and we have full confidence in the safety of the 737 MAX.*** We understand that regulatory agencies and customers have made decisions that they believe are most appropriate for their home markets. We'll continue to engage with them to ensure they have the information needed to have confidence in operating their fleets. The United States Federal Aviation Administration is not mandating any further action at this time, and based on the information currently available, ***we do not have any basis to issue new guidance to operators.***

313. These statements were materially false and misleading. It was materially misleading for Defendants to tell the market that the 737 MAX was safe when the precise opposite was true. It was also materially misleading for Defendants to state that MCAS does not control the airplane during normal flight when, in fact, it could operate during nearly the entire speed range for the 737 MAX, including at lower altitudes in and around takeoff and landing. It was also materially misleading for Defendants to direct flight crews to existing procedures when those procedures were woefully insufficient to address MCAS. Among other things: (1) MCAS was susceptible to a single point of failure, which was contrary to industry norms, federal regulations, and the Company's own historical practices; (2) Defendants made fundamental and deadly changes to MCAS that greatly expanded its scope and the circumstances under which it could activate; (3) these changes allowed MCAS to operate during nearly the entire speed range for the

737 MAX, including at lower altitudes in and around takeoff and landing; (4) Defendants knew by February 2019, at the latest, that Forkner had concealed these changes from the FAA and that the FAA had certified the 737 MAX and recommended Level B differences training based on incorrect facts about MCAS; (5) Defendants knew in August 2017 that the AOA Disagree Alert was inoperable on 80% of the 737 MAX airplanes that it had delivered so far, but decided to wait until 2020 to fix the AOA Disagree Alert, producing and delivering 737 MAX airplanes with inoperable AOA Disagree Alerts in the meantime; (6) Defendants misled the FAA into removing all references to MCAS from the 737 MAX's FCOM despite knowing that the process of overriding MCAS was complex and could result in “catastrophic” consequences if not performed quickly enough, and that it had taken one of Boeing’s test pilots more than 10 seconds to identify and disable MCAS; (7) Defendants did not disclose MCAS to pilots, train them on it, or explain how to deactivate it in the 737 MAX’s FCOM; (8) MCAS was an entirely new system that had never been used on one of Boeing’s commercial airplanes before; (9) MCAS could not be disabled in the same way that the automatic flight systems on all other Boeing airplanes could be disabled; (10) Boeing employees raised significant concerns about the safety of the 737 MAX; (11) Defendants knew MCAS had caused both the Lion Air and Ethiopian Airlines crashes; (12) Defendants knew that the assumptions on which Boeing had based its four second reaction time estimate were flawed; and (13) Defendants had requested permission from the FAA to update the 737 MAX’s FCOM to include references to MCAS and suggested that pilots receive Level D differences training on the 737 MAX using a full-flight simulator.

314. On March 13, 2019, Boeing issued a press release titled, *In Consultation with the FAA, NTSB and its Customers, Boeing Supports Action to Temporarily Ground 737 MAX Operations*. Though Defendant Muilenburg had – less than 24 hours earlier – “made the case [to

President Trump] that the 737 [MAX] planes should not be grounded in the United States,” Boeing now purported to support the FAA’s decision to ground the 737 MAX “out of an abundance of caution.” The press release stated, in relevant part:

***Boeing continues to have full confidence in the safety of the 737 MAX.*** However, after consultation with the U.S. Federal Aviation Administration (FAA), the U.S. National Transportation Safety Board (NTSB), and aviation authorities and its customers around the world, ***Boeing has determined -- out of an abundance of caution and in order to reassure the flying public of the aircraft's safety -- to recommend to the FAA the temporary suspension of operations of the entire global fleet of 371 737 MAX aircraft.***

***We are supporting this proactive step out of an abundance of caution. Safety is a core value at Boeing*** for as long as we have been building airplanes; and it always will be. ***There is no greater priority for our company and our industry.*** We are doing everything we can to understand the cause of the accidents in partnership with the investigators, deploy safety enhancements and help ensure this does not happen again.”

315. These statements were materially false and misleading. It was materially misleading for Defendants to tell the market that the 737 MAX was safe when the precise opposite was true. It was also materially misleading for Defendants to state that they supported the grounding of the 737 MAX when Defendant Muilenburg had made a personal plea to President Trump to keep the airplane in the air. Among other things: (1) MCAS was susceptible to a single point of failure, which was contrary to industry norms, federal regulations, and the Company’s own historical practices; (2) Defendants made fundamental and deadly changes to MCAS that greatly expanded its scope and the circumstances under which it could activate; (3) Defendants knew by February 2019, at the latest, that Forkner had concealed these changes from the FAA and that the FAA had certified the 737 MAX and recommended Level B differences training based on incorrect facts about MCAS; (4) Defendants knew in August 2017 that the AOA Disagree Alert was inoperable on 80% of the 737 MAX airplanes that it had delivered so far, but decided to wait

until 2020 to fix the AOA Disagree Alert, producing and delivering 737 MAX airplanes with inoperable AOA Disagree Alerts in the meantime; (5) Defendants misled the FAA into removing all references to MCAS from the 737 MAX's FCOM despite knowing that the process of overriding MCAS was complex and could result in “catastrophic” consequences if not performed quickly enough, and that it had taken one of Boeing’s test pilots more than 10 seconds to identify and disable MCAS; (6) Defendants did not disclose MCAS to pilots, train them on it, or explain how to deactivate it in the 737 MAX’s FCOM; (7) MCAS was an entirely new system that had never been used on one of Boeing’s commercial airplanes before; (8) MCAS could not be disabled in the same way that the automatic flight systems on all other Boeing airplanes could be disabled; (9) Boeing employees raised significant concerns about the safety of the 737 MAX; (10) Defendants knew MCAS had caused both the Lion Air and Ethiopian Airlines crashes; (11) Defendants knew that the assumptions on which Boeing had based its four second reaction time estimate were flawed; (12) Defendants had requested permission from the FAA to update the 737 MAX’s FCOM to include references to MCAS and suggested that pilots receive Level D differences training on the 737 MAX using a full-flight simulator; (13) Defendants were updating MCAS to make it safer; and (14) a day earlier, Defendant Muilenburg made the case to President Trump that the 737 MAX should not be grounded.

316. On Sunday, March 17, 2019, Defendant Muilenburg issued a *Statement on Ethiopian Airlines Flight 302 Accident Investigation*. Defendant Muilenburg stated, in relevant part:

Boeing continues to support the investigation, and is working with the authorities to evaluate new information as it becomes available. ***Safety is our highest priority as we design, build and support our airplanes.*** As part of our standard practice following any accident, we examine our aircraft design and operation, and when appropriate, institute product updates to further improve safety. While

investigators continue to work to establish definitive conclusions, *Boeing is finalizing its development of a previously-announced software update and pilot training revision that will address the MCAS flight control law's behavior in response to erroneous sensor inputs.*

317. On March 18, 2019, Boeing published a letter from Defendant Muilenburg to “Airlines, Passengers and the Aviation Community.” In the letter, Defendant Muilenburg reassured Boeing’s customers and investors and the flying public that the 737 MAX was safe and that Boeing was just making it “even safer” by updating MCAS’s software:

*Safety is at the core of who we are at Boeing, and ensuring safe and reliable travel on our airplanes is an enduring value and our absolute commitment to everyone.* This overarching focus on safety spans and binds together our entire global aerospace industry and communities. We’re united with our airline customers, international regulators and government authorities in our efforts to support the most recent investigation, understand the facts of what happened and help prevent future tragedies. Based on facts from the Lion Air Flight 610 accident and emerging data as it becomes available from the Ethiopian Airlines Flight 302 accident, *we're taking actions to fully ensure the safety of the 737 MAX.*

Boeing has been in the business of aviation safety for more than 100 years, and *we'll continue providing the best products, training and support to our global airline customers and pilots. This is an ongoing and relentless commitment to make safe airplanes even safer. Soon we'll release a software update and related pilot training for the 737 MAX that will address concerns discovered in the aftermath of the Lion Air Flight 610 accident. . . .*

*Our entire team is devoted to the quality and safety of the aircraft we design, produce and support.*

318. These statements were materially false and misleading. It was materially misleading for Defendants to tell the market that the 737 MAX was safe when the precise opposite was true. Among other things: (1) MCAS was susceptible to a single point of failure, which was contrary to industry norms, federal regulations, and the Company’s own historical practices; (2) Defendants made fundamental and deadly changes to MCAS that greatly expanded its scope and

the circumstances under which it could activate; (3) Defendants knew by February 2019, at the latest, that Forkner had concealed these changes from the FAA and that the FAA had certified the 737 MAX and recommended Level B differences training based on incorrect facts about MCAS; (4) Defendants knew in August 2017 that the AOA Disagree Alert was inoperable on 80% of the 737 MAX airplanes that it had delivered so far, but decided to wait until 2020 to fix the AOA Disagree Alert, producing and delivering 737 MAX airplanes with inoperable AOA Disagree Alerts in the meantime; (5) Defendants misled the FAA into removing all references to MCAS from the 737 MAX's FCOM despite knowing that the process of overriding MCAS was complex and could result in “catastrophic” consequences if not performed quickly enough, and that it had taken one of Boeing’s test pilots more than 10 seconds to identify and disable MCAS; (6) Defendants did not disclose MCAS to pilots, train them on it, or explain how to deactivate it in the 737 MAX’s FCOM; (7) MCAS was an entirely new system that had never been used on one of Boeing’s commercial airplanes before; (8) MCAS could not be disabled in the same way that the automatic flight systems on all other Boeing airplanes could be disabled; (9) Boeing employees raised significant concerns about the safety of the 737 MAX; (10) Defendants knew MCAS had caused both the Lion Air and Ethiopian Airlines crashes; (11) Defendants knew that the assumptions on which Boeing had based its four second reaction time estimate were flawed; and (12) Defendants had requested permission from the FAA to update the 737 MAX’s FCOM to include references to MCAS and suggested that pilots receive Level D differences training on the 737 MAX using a full-flight simulator.

319. On March 22, 2019, Boeing issued press release in response to *The New York Times* article regarding the AOA Indicator. The press release stated, in relevant part:

***All Boeing airplanes are certified and delivered to the highest levels of safety consistent with industry standards. Airplanes are***

*delivered with a baseline configuration, which includes a standard set of flight deck displays and alerts, crew procedures and training materials that meet industry safety norms* and most customer requirements. Customers may choose additional options, such as alerts and indications, to customize their airplanes to support their individual operations or requirements . . . .

320. These statements were materially false and misleading. It was materially misleading for Defendants to tout the certification of the 737 MAX when, in fact, they had withheld information from the FAA. It was also materially misleading for Defendants to tell the market that the 737 MAX was safe when the precise opposite was true. Among other things: (1) MCAS was susceptible to a single point of failure, which was contrary to industry norms, federal regulations, and the Company's own historical practices; (2) Defendants made fundamental and deadly changes to MCAS that greatly expanded its scope and the circumstances under which it could activate; (3) Defendants knew by February 2019, at the latest, that Forkner had concealed these changes from the FAA and that the FAA had certified the 737 MAX and recommended Level B differences training based on incorrect facts about MCAS; (4) Defendants knew in August 2017 that the AOA Disagree Alert was inoperable on 80% of the 737 MAX airplanes that it had delivered so far, but decided to wait until 2020 to fix the AOA Disagree Alert, producing and delivering 737 MAX airplanes with inoperable AOA Disagree Alerts in the meantime; (5) Defendants misled the FAA into removing all references to MCAS from the 737 MAX's FCOM despite knowing that the process of overriding MCAS was complex and could result in "catastrophic" consequences if not performed quickly enough, and that it had taken one of Boeing's test pilots more than 10 seconds to identify and disable MCAS; (6) Defendants did not disclose MCAS to pilots, train them on it, or explain how to deactivate it in the 737 MAX's FCOM; (7) MCAS was an entirely new system that had never been used on one of Boeing's commercial airplanes before; (8) MCAS could not be disabled in the same way that the automatic flight systems

on all other Boeing airplanes could be disabled; (9) Boeing employees raised significant concerns about the safety of the 737 MAX; (10) Defendants knew MCAS had caused both the Lion Air and Ethiopian Airlines crashes; (11) Defendants knew that the assumptions on which Boeing had based its four second reaction time estimate were flawed; and (12) Defendants had requested permission from the FAA to update the 737 MAX's FCOM to include references to MCAS and suggested that pilots receive Level D differences training on the 737 MAX using a full-flight simulator.

321. A week later, on March 27, 2019, Boeing met with pilots and airline executives at its Renton, Washington factory. *The New York Times* reported that, during the meeting, Boeing continued to represent that the 737 MAX was safe. The Company also posted a statement on its website claiming that it “***developed an MCAS software update to provide additional layers of protection if the AOA sensors provide erroneous data.***”

322. After the markets closed on April 5, 2019, Boeing issued a statement from Defendant Muilenburg providing a “737 MAX Software, Production and Process Update” and proclaiming “We Own Safety.” Defendant Muilenburg stated:

We now know that the recent Lion Air Flight 610 and Ethiopian Airlines Flight 302 accidents were caused by a chain of events, with a common chain link being erroneous activation of the aircraft's MCAS function. We have the responsibility to eliminate this risk, and we know how to do it. As part of this effort, we're making progress on the 737 MAX software update that will prevent accidents like these from ever happening again. Teams are working tirelessly, advancing and testing the software, conducting non-advocate reviews, and engaging regulators and customers worldwide as we proceed to final certification. I recently had the opportunity to experience the software update performing safely in action during a 737 MAX 7 demo flight. We're also finalizing new pilot training courses and supplementary educational material for our global MAX customers. ***This progress is the result of our comprehensive, disciplined approach and taking the time necessary to get it right. . . .***

***Safety is our responsibility, and we own it.***

323. These statements were materially false and misleading. It was materially misleading for Defendants to represent that they were taking a disciplined approach to re-certifying the 737 MAX when they had defrauded the FAA into certifying the 737 MAX in the first place. It was also materially misleading for Defendants to tell the market that the 737 MAX was safe when the precise opposite was true. Among other things: (1) MCAS was susceptible to a single point of failure, which was contrary to industry norms, federal regulations, and the Company's own historical practices; (2) Defendants made fundamental and deadly changes to MCAS that greatly expanded its scope and the circumstances under which it could activate; (3) Defendants knew by February 2019, at the latest, that Forkner had concealed these changes from the FAA and that the FAA had certified the 737 MAX and recommended Level B differences training based on incorrect facts about MCAS; (4) Defendants knew in August 2017 that the AOA Disagree Alert was inoperable on 80% of the 737 MAX airplanes that it had delivered so far, but decided to wait until 2020 to fix the AOA Disagree Alert, producing and delivering 737 MAX airplanes with inoperable AOA Disagree Alerts in the meantime; (5) Defendants misled the FAA into removing all references to MCAS from the 737 MAX's FCOM despite knowing that the process of overriding MCAS was complex and could result in "catastrophic" consequences if not performed quickly enough, and that it had taken one of Boeing's test pilots more than 10 seconds to identify and disable MCAS; (6) Defendants did not disclose MCAS to pilots, train them on it, or explain how to deactivate it in the 737 MAX's FCOM; (7) MCAS was an entirely new system that had never been used on one of Boeing's commercial airplanes before; (8) MCAS could not be disabled in the same way that the automatic flight systems on all other Boeing airplanes could be disabled; (9) Boeing employees raised significant concerns about the safety of the 737 MAX; (10) Defendants knew MCAS had caused both the Lion Air and Ethiopian Airlines crashes; (11)

Defendants knew that the assumptions on which Boeing had based its four second reaction time estimate were flawed; and (12) Defendants had requested permission from the FAA to update the 737 MAX's FCOM to include references to MCAS and suggested that pilots receive Level D differences training on the 737 MAX using a full-flight simulator.

324. Shortly thereafter, on April 11, 2019, Defendant Muilenburg presented at the George W. Bush Presidential Center Forum on Leadership. During his presentation, Defendant Muilenburg again represented that the 737 MAX was safe, that the software update to MCAS was in its final stages and would be implemented shortly thereafter, and that Boeing had already “met all certification requirements” necessary to get the 737 MAX back in service. He stated:

First, it’s important to communicate clearly and openly. . . . It’s important that people’s concerns are heard and that their questions answered. In times like these, it’s not possible to over-communicate, and *I’ve been updating our people frequently as details emerge and are available, and it’s appropriate to do so aligned with our international aviation protocol.*

*As we learned the facts, I also reached out to our airline customers, partners and communities in open letters and videos to share our support of the investigations, and the steps underway to avoid future accidents and our ongoing priority of safety. . . .*

*From the days immediately following the Lion Air accident, our top engineers and technical experts have been working tirelessly in collaboration with the Federal Aviation Administration and our customers to finalize and implement a software update that will ensure accidents like these never happen again.*

*The update will make the 737 MAX even safer by preventing erroneous angle of attack sensor readings from triggering the Maneuvering Characteristics Augmentation System, or MCAS, something that initial investigation reports indicate occurred in both MAX accidents, as one link in a longer chain of events. We know we can break this chain link. It’s our responsibility to eliminate this risk. . . .*

Overall, our team has made 96 flights totaling a little over 159 hours of air time with the updated software. They will conduct additional test and production flights in the coming weeks *as we continue to*

*demonstrate that we've identified and met all certification requirements. We look forward to completing near-term milestones on the path to final certification.*

325. These statements were materially false and misleading. It was materially misleading for Defendants to represent that they had been forthcoming with the public about the Lion Air and Ethiopian Airlines crashes and how to avoid future crashes when, as detailed herein, they falsely claimed that the 737 MAX was safe when it was not and that existing procedures were sufficient to combat MCAS when they were not. It was also materially misleading for Defendants to tell the market that the 737 MAX was safe when the precise opposite was true. Furthermore, it was materially misleading for Defendants to state that Boeing had met all the requirements for the 737 MAX to be re-certified and was on the final path to certification when the process was far from over. Among other things: (1) MCAS was susceptible to a single point of failure, which was contrary to industry norms, federal regulations, and the Company's own historical practices; (2) Defendants made fundamental and deadly changes to MCAS that greatly expanded its scope and the circumstances under which it could activate; (3) Defendants knew by February 2019, at the latest, that Forkner had concealed these changes from the FAA and that the FAA had certified the 737 MAX and recommended Level B differences training based on incorrect facts about MCAS; (4) Defendants knew in August 2017 that the AOA Disagree Alert was inoperable on 80% of the 737 MAX airplanes that it had delivered so far, but decided to wait until 2020 to fix the AOA Disagree Alert, producing and delivering 737 MAX airplanes with inoperable AOA Disagree Alerts in the meantime; (5) Defendants misled the FAA into removing all references to MCAS from the 737 MAX's FCOM despite knowing that the process of overriding MCAS was complex and could result in "catastrophic" consequences if not performed quickly enough, and that it had taken one of Boeing's test pilots more than 10 seconds to identify and disable MCAS; (6) Defendants did not disclose MCAS to pilots, train them on it, or explain how to deactivate it in the

737 MAX's FCOM; (7) MCAS was an entirely new system that had never been used on one of Boeing's commercial airplanes before; (8) MCAS could not be disabled in the same way that the automatic flight systems on all other Boeing airplanes could be disabled; (9) Boeing employees raised significant concerns about the safety of the 737 MAX; (10) Defendants knew MCAS had caused both the Lion Air and Ethiopian Airlines crashes; (11) Defendants knew that the assumptions on which Boeing had based its four second reaction time estimate were flawed; (12) Defendants had requested permission from the FAA to update the 737 MAX's FCOM to include references to MCAS and suggested that pilots receive Level D differences training on the 737 MAX using a full-flight simulator; and (13) the FAA was still in the midst of evaluating the 737 MAX for recertification.

326. On April 24, 2019, Boeing filed the 1Q2019 10-Q with the SEC. With respect to the grounding of the 737 MAX, the 1Q2019 10-Q stated:

We have been developing a software update to the Maneuvering Characteristics Augmentation System (MCAS) on the 737 MAX, together with an associated pilot training and supplementary education program. ***We continue to work with the FAA and other regulatory agencies worldwide to develop and certify the software update and training program.***

327. In the press release accompanying the 1Q2019 10-Q, Boeing again represented that it was “***making steady progress on the path to final certification for a software update for the 737 MAX,*** with over 135 test and production flights of the software update complete. ***The company continues to work closely with global regulators and our airline partners to comprehensively test the software and finalize a robust package of training and educational resources.***”

328. During a conference call with investors the next day, April 25, 2019, Defendant Muilenburg was asked by an analyst from Sanford C. Bernstein & Co. LLC about the process for returning the 737 MAX to service. Defendant Muilenburg responded:

[R]eturning the airplane to service and doing so safely, just to give you a sense of the key steps to go there, as we know from the accident investigations to-date, as and publicly announced through the preliminary reports, both accidents were a chain of events. We know there was one common link in that chain of events and that was the activation of the MCAS system with erroneous angle of attack data. That's been well published. *And as we said, we understand how to address that link. That's our responsibility. We own that, and that's what that software update does. . . .*

*The next step in that process will be the certification flight under the FAA's authority, and we are working with the FAA right now to prepare for that in the near term.*

329. A Bank of America Merrill Lynch analyst then asked Defendant Muilenburg "how did this happen, right? . . . Is there any way you can give us a feeling for how did this slip through the engineering organization?" Defendant Muilenburg stated:

*Yeah, Ron, there is no technical slip or gap here, right?* Again, as I mentioned, we know that both accidents were a series of events, and that is very common to all accidents that we've seen in history. And what we know is that in this case, there was erroneous angle-of-attack information that came into the airplane from multiple causes. We know at that some point during the flight, that activated the MCAS control laws, and *we know that ultimately there were actions or actions not taken that contributed to the final outcome.*

*But I can tell you with confidence that we understand our airplane, we understand how the design was accomplished, how the certification was accomplished, and remain fully confident in the product that we've put in the field.* But we also know there are areas that we can improve, and that is the source of the software update here. *But there was no surprise or gap or unknown here or something that somehow slipped through a certification process. Quite the opposite. We know exactly how the airplane was designed. We know exactly how it was certified. We have taken the time to understand that.* That has led to the software update that we've been implementing and testing, and *we're very confident that*

*when the fleet comes back up, the MAX will be one of the safest airplanes ever to fly.*

330. Defendant Smith also told investors during the conference call that Boeing was *“taking steps amid current challenges to preserve the future value and growth of this important franchise for our company and for our customers.”*

331. These statements were materially false and misleading. It was materially misleading for Defendants to tell the market that the 737 MAX was safe when the precise opposite was true. It was also materially misleading for Defendants to state that Boeing was making steady progress towards re-certification and knew how to fix MCAS when the process was far from over. It was also materially misleading for Defendants to state that nothing out of the ordinary happened in connection with the certification of the 737 MAX when, in fact, they had defrauded the FAA into certifying the 737 MAX based on incorrect information. Among other things: (1) MCAS was susceptible to a single point of failure, which was contrary to industry norms, federal regulations, and the Company’s own historical practices; (2) Defendants made fundamental and deadly changes to MCAS that greatly expanded its scope and the circumstances under which it could activate; (3) Defendants knew by February 2019, at the latest, that Forkner had concealed these changes from the FAA and that the FAA had certified the 737 MAX and recommended Level B differences training based on incorrect facts about MCAS; (4) Defendants knew in August 2017 that the AOA Disagree Alert was inoperable on 80% of the 737 MAX airplanes that it had delivered so far, but decided to wait until 2020 to fix the AOA Disagree Alert, producing and delivering 737 MAX airplanes with inoperable AOA Disagree Alerts in the meantime; (5) Defendants misled the FAA into removing all references to MCAS from the 737 MAX’s FCOM despite knowing that the process of overriding MCAS was complex and could result in “catastrophic” consequences if not performed quickly enough, and that it had taken one of

Boeing's test pilots more than 10 seconds to identify and disable MCAS; (6) Defendants did not disclose MCAS to pilots, train them on it, or explain how to deactivate it in the 737 MAX's FCOM; (7) MCAS was an entirely new system that had never been used on one of Boeing's commercial airplanes before; (8) MCAS could not be disabled in the same way that the automatic flight systems on all other Boeing airplanes could be disabled; (9) Boeing employees raised significant concerns about the safety of the 737 MAX; (10) Defendants knew MCAS had caused both the Lion Air and Ethiopian Airlines crashes; (11) Defendants knew that the assumptions on which Boeing had based its four second reaction time estimate were flawed; (12) Defendants had requested permission from the FAA to update the 737 MAX's FCOM to include references to MCAS and suggested that pilots receive Level D differences training on the 737 MAX using a full-flight simulator; (13) the FAA was still in the midst of evaluating the 737 MAX for recertification; and (14) Defendants were still working on changes to MCAS.

332. On April 29, 2019, Boeing issued a statement in response to Southwest's statement regarding the AOA Disagree Alert. Although Boeing acknowledged that the AOA Disagree Alert "was not activated as intended," the Company still maintained that pilots had "all flight data and information needed to safely operate the aircraft":

*Boeing included the disagree alert as a standard feature on the MAX, although this alert has not been considered a safety feature on airplanes and is not necessary for the safe operation of the airplane.* Boeing did not intentionally or otherwise deactivate the disagree alert on its MAX airplanes.

*The disagree alert was intended to be a standard, stand-alone feature on MAX airplanes. However, the disagree alert was not operable on all airplanes because the feature was not activated as intended.*

The disagree alert was tied or linked into the angle of attack indicator, which is an optional feature on the MAX. Unless an airline opted for the angle of attack indicator, the disagree alert was not operable.

*On every airplane delivered to our customers, including the MAX, all flight data and information needed to safely operate the aircraft is provided in the flight deck and on the flight deck display. This information is readily accessible to pilots, and it always has been.*

333. Boeing issued another statement downplaying the importance of the AOA Disagree Alert on May 5, 2019. The statement provided, in relevant part:

*On every airplane delivered to our customers, including the MAX, all flight data and information needed to safely operate the aircraft is provided in the flight deck on the primary flight deck displays. This information is provided full-time in the pilots' primary field of view, and it always has been. . . .*

Neither the angle of attack indicator nor the AOA Disagree alert are necessary for the safe operation of the airplane. *They provide supplemental information only, and have never been considered safety features on commercial jet transport airplanes.*

The Boeing design requirements for the 737 MAX included the AOA Disagree alert as a standard, standalone feature, *in keeping with Boeing's fundamental design philosophy of retaining commonality with the 737NG*. In 2017, within several months after beginning 737 MAX deliveries, engineers at Boeing identified that the 737 MAX display system software did not correctly meet the AOA Disagree alert requirements. The software delivered to Boeing linked the AOA Disagree alert to the AOA indicator, which is an optional feature on the MAX and the NG. Accordingly, the software activated the AOA Disagree alert only if an airline opted for the AOA indicator.

When the discrepancy between the requirements and the software was identified, Boeing followed its standard process for determining the appropriate resolution of such issues. *That review, which involved multiple company subject matter experts, determined that the absence of the AOA Disagree alert did not adversely impact airplane safety or operation. Accordingly, the review concluded, the existing functionality was acceptable until the alert and the indicator could be delinked in the next planned display system software update.*

334. These statements were materially false and misleading. It was materially misleading for Defendants to represent that pilots had all the information they needed to safely operate the 737 MAX when there was no reference to MCAS in the airplane's FCOM and the

AOA Disagree Alert was inoperable on 80% of 737 MAX airplanes. It was also materially misleading for Defendants to represent that the AOA Disagree Alert was not a safety feature and its malfunction did not adversely impact the safety or operation of the 737 MAX when they had previously said the opposite. Among other things: (1) MCAS was susceptible to a single point of failure, which was contrary to industry norms, federal regulations, and the Company's own historical practices; (2) Defendants made fundamental and deadly changes to MCAS that greatly expanded its scope and the circumstances under which it could activate; (3) Defendants knew by February 2019, at the latest, that Forkner had concealed these changes from the FAA and that the FAA had certified the 737 MAX and recommended Level B differences training based on incorrect facts about MCAS; (4) Defendants knew in August 2017 that the AOA Disagree Alert was inoperable on 80% of the 737 MAX airplanes that it had delivered so far, but decided to wait until 2020 to fix the AOA Disagree Alert, producing and delivering 737 MAX airplanes with inoperable AOA Disagree Alerts in the meantime; (5) Defendants misled the FAA into removing all references to MCAS from the 737 MAX's FCOM despite knowing that the process of overriding MCAS was complex and could result in "catastrophic" consequences if not performed quickly enough, and that it had taken one of Boeing's test pilots more than 10 seconds to identify and disable MCAS; (6) Defendants did not disclose MCAS to pilots, train them on it, or explain how to deactivate it in the 737 MAX's FCOM; (7) MCAS was an entirely new system that had never been used on one of Boeing's commercial airplanes before; (8) MCAS could not be disabled in the same way that the automatic flight systems on all other Boeing airplanes could be disabled; (9) Boeing employees raised significant concerns about the safety of the 737 MAX; (10) Defendants knew MCAS had caused both the Lion Air and Ethiopian Airlines crashes; (11) Defendants knew that the assumptions on which Boeing had based its four second reaction time estimate were

flawed; (12) Defendants had requested permission from the FAA to update the 737 MAX's FCOM to include references to MCAS and suggested that pilots receive Level D differences training on the 737 MAX using a full-flight simulator; and (13) Vice President Sinnett admitted to American Airlines pilots that MCAS was safety critical software and that a functioning AOA Disagree Alert would have prevented the Lion Air crash.

335. On May 29, 2019, Defendant Muilenburg presented at the Sanford C. Bernstein Strategic Decisions Conference. During his remarks, Defendant Muilenburg again represented that Boeing was in the final stages of the re-certification process and that the 737 MAX would be returned to service in the near future:

[W]e've been working hand-in-hand with the investigation authorities on both accidents. We've been able to with them gain a clear insight on what occurred. We know that in both accidents, a common link was the so-called MCAS software on the MAX that you've all read about in the news. We've identified specific improvements to that software. We've completed the engineering testing and flight testing on that software and *we are now in the process of applying for final certification. We are finishing that dialogue with the FAA, working through a series of questions and answers with them.* Once that's complete, we will schedule the certification flight and that would be the next step to returning the airplane to service. So that is all work that we are doing hourly, daily, very active, number one focus for my company right now, getting the 737 MAX fleet returned to service safely.

336. Defendant Muilenburg went on to say that Boeing was:

*[M]aking clear and steady progress and that includes the work that we're doing on the airplane update, the software update, working through the certification process with the FAA, heading towards our certification flight.* We're also working on updates to training and education materials, and we've had a number of sessions with pilots to get their inputs on those training materials and working that with our customers and regulatory authorities.

337. Defendant Smith made similar statements during the UBS Global Industrials and Transportation Conference on June 5, 2019. During his presentation, Defendant Smith stated that

Boeing was “day-in and day-out working with our regulators and *ensuring that we're answering all the questions, addressing any concerns that are taking place, that's a daily occurrence.* So we've got a team working seven days a week, addressing anything that comes in.” Defendant Smith went on to explain that Boeing had “*resources from across the company that are just turning these things around in a very timely manner and ensuring that we're meeting their priorities and the needs of the regulators. . . . look there's a lot of progress. There is a lot of progress that's been made.*”

338. On June 7 2019, CNET published an article regarding the 737 MAX’s AOA Disagree Alert. The CNET article referenced a May 31, 2019 statement from Boeing in which the Company reiterated its previous statement that “*the absence of [an AOA Disagree] alert didn't adversely affect airplane safety or operation.*”

339. These statements were materially false and misleading. It was materially misleading for Defendants to state that Boeing was making steady progress towards, and was in the final stages of, re-certification when the process was far from over. It was also materially misleading for Defendants to represent that the inoperable AOA Disagree Alert did not adversely impact the safety or operation of the 737 MAX when they had previously said the opposite. Among other things: (1) Defendants knew in August 2017 that the AOA Disagree Alert was inoperable on 80% of the 737 MAX airplanes that it had delivered so far, but decided to wait until 2020 to fix the AOA Disagree Alert, producing and delivering 737 MAX airplanes with inoperable AOA Disagree Alerts in the meantime; (2) Boeing employees raised significant concerns about the safety of the 737 MAX; (3) Vice President Sinnett admitted to American Airlines pilots that MCAS was safety critical software and that a functioning AOA Disagree Alert would have

prevented the Lion Air crash; (4) the FAA was still in the midst of evaluating the 737 MAX for recertification; and (5) Defendants were still working on changes to MCAS.

340. On June 26, 2019, Defendant Muilenburg presented at the Aspen Ideas Festival. Ignoring the FAA's pleas for patience, Defendant Muilenburg stated that the "*end of summer*" 2019 – only one or two months away – was "*still the timeframe [Boeing] was looking at*" for the return to service of the 737 MAX.

341. Defendant Muilenburg's statement was materially false and misleading. It was materially misleading for Defendant Muilenburg to state that Boeing was looking at the end of summer 2019 for the return to service of the 737 MAX when the process was far from over. Among other things: (1) the FAA was still in the midst of evaluating the 737 MAX for recertification; (2) Acting FAA Administrator Elwell had asked Defendant Muilenburg to "slow down its talk of progress" regarding the recertification and return to service of the 737 MAX; and (3) Defendants were still working on changes to MCAS.

342. On July 18, 2019, Boeing issued a press release detailing its recertification efforts with the FAA and providing an updated timeframe for the 737 MAX's return to service. The press release stated that Boeing "*continues to work with civil aviation authorities to ensure the 737 MAX's safe return to service*" and "*has assumed that regulatory approval of 737 MAX return to service in the U.S. and other jurisdictions begins early in the fourth quarter 2019.*" Boeing further assumed "*a gradual increase in the 737 production rate from 42 per month to 57 per month in 2020.*"

343. These statements were materially false and misleading. It was materially misleading for Defendants to represent that the 737 MAX would be recertified and returned to service in the fourth quarter of 2019 when the process was far from over. It was also materially

misleading for Defendants to disclose a production rate when its sales and production could no longer reasonably be relied on in light of the safety problems that rendered the airplane fundamentally unsafe. Among other things: (1) MCAS was susceptible to a single point of failure, which was contrary to industry norms, federal regulations, and the Company's own historical practices; (2) Defendants made fundamental and deadly changes to MCAS that greatly expanded its scope and the circumstances under which it could activate; (3) Defendants knew by February 2019, at the latest, that Forkner had concealed these changes from the FAA and that the FAA had certified the 737 MAX and recommended Level B differences training based on incorrect facts about MCAS; (4) Defendants knew in August 2017 that the AOA Disagree Alert was inoperable on 80% of the 737 MAX airplanes that it had delivered so far, but decided to wait until 2020 to fix the AOA Disagree Alert, producing and delivering 737 MAX airplanes with inoperable AOA Disagree Alerts in the meantime; (5) Defendants misled the FAA into removing all references to MCAS from the 737 MAX's FCOM despite knowing that the process of overriding MCAS was complex and could result in "catastrophic" consequences if not performed quickly enough, and that it had taken one of Boeing's test pilots more than 10 seconds to identify and disable MCAS; (6) Defendants did not disclose MCAS to pilots, train them on it, or explain how to deactivate it in the 737 MAX's FCOM; (7) MCAS was an entirely new system that had never been used on one of Boeing's commercial airplanes before; (8) MCAS could not be disabled in the same way that the automatic flight systems on all other Boeing airplanes could be disabled; (9) Boeing employees raised significant concerns about the safety of the 737 MAX; (10) Defendants knew MCAS had caused both the Lion Air and Ethiopian Airlines crashes; (11) Defendants knew that the assumptions on which Boeing had based its four second reaction time estimate were flawed; (12) Defendants had requested permission from the FAA to update the 737 MAX's FCOM to include

references to MCAS and suggested that pilots receive Level D differences training on the 737 MAX using a full-flight simulator; (13) Vice President Sinnett admitted to American Airlines pilots that MCAS was safety critical software and that a functioning AOA Disagree Alert would have prevented the Lion Air crash; (14) the FAA was still in the midst of evaluating the 737 MAX for recertification; (15) Acting FAA Administrator Elwell had asked Defendant Muilenburg to “slow down its talk of progress” regarding the recertification and return to service of the 737 MAX; and (16) Defendants were still working on changes to MCAS.

344. On July 24, 2019, Boeing filed the 2Q2019 10-Q. During a conference call that day, Defendant Muilenburg stated:

Now, let me turn to the latest on the MAX technical updates. . . . we are working with the FAA and other regulators to complete as many elements of the certification process as possible in parallel with the development of the software update. ***We will submit our final certification package to the FAA once we have satisfied all of their requirements, which we currently estimate will be in the September timeframe.***

345. Defendant Smith likewise represented that “[f]or the purpose of our second quarter financial results, ***we have assumed that the regulatory approval in the U.S. and other jurisdictions begin early in fourth quarter 2019.***”

346. When questioned about the timeline for re-certification of the 737 MAX, Defendant Muilenburg stated “***[w]e’re making good steady progress on that. And we see convergence, so we know we’re making progress.***” “[W]hen we say return to service early in the fourth quarter, we have to work through all of these uncertainties, the software update and the certification of the airplane itself as well as the training curriculum, as well as preparation for all of our customers to get the fleet back up and running. ***And we have good understanding of each of those work flows. We know the work that has to be done. We are on it on a daily basis.***”

347. Defendant Muilenburg was then questioned by a reporter from *The Seattle Times* about the “optimistic assumptions” underlying Boeing’s timeline for returning the 737 MAX to service. Defendant Muilenburg responded that Boeing’s “current best estimate” was “***to deliver our certification package including the certification flight in that September timeframe and then return to service early in the fourth quarter.*** . . . We have taken our best estimate at that and factored that into the analysis and numbers that we shared with you today, and ***we are assessing that on a daily basis and working hand in hand with the FAA in this process.***”

348. These statements were materially false and misleading. It was materially misleading for Defendants to represent that the 737 MAX would be recertified and returned to service in the fourth quarter of 2019 when the process was far from over. Among other things: (1) the FAA was still in the midst of evaluating the 737 MAX for recertification; (2) Acting FAA Administrator Elwell had asked Defendant Muilenburg to “slow down its talk of progress” regarding the recertification and return to service of the 737 MAX; and (3) Defendants were still working on changes to MCAS.

349. On September 11, 2019, Defendant Muilenburg presented at the Morgan Stanley Laguna Conference. Defendant Muilenburg stated:

***On the 737 MAX, we’re continuing to make solid progress on return-to-service and we’re actively engaged with regulators around the world and day to day working with the FAA on a return-to-service timing. We are making good, solid progress on the software update to the airplane, versions of that final software in our integration labs and simulators being tested and we are still targeting early fourth quarter for a return-to-service of the 737 MAX.***

350. In response to a question from an analyst about Boeing’s submissions to the FAA, Defendant Muilenburg stated:

We’re working through all of those certification deliverables with the FAA. So think of that as an iterative process that includes

software and training materials along with a number of other certification documents and ***we have very active engagement with the FAA*** and the other regulators on those documents, so still open questions that we're working our way through. ***All of that work supports our timeline for an early fourth quarter return-to-service***, but this is not a single event. There's a number of iterations that will occur. I will say that early versions of that final software now in our test and integration labs are going through simulation testing and ***all of that work is converging and supporting our return-to-service timeline.***

351. Defendant Muilenburg's statements were materially false and misleading. It was materially misleading for Defendants to represent that the 737 MAX would be recertified and returned to service in the fourth quarter of 2019 when the process was far from over. Among other things: (1) the FAA was still in the midst of evaluating the 737 MAX for recertification; (2) Acting FAA Administrator Elwell had asked Defendant Muilenburg to "slow down its talk of progress" regarding the recertification and return to service of the 737 MAX so that the FAA had the appropriate space to "exercise scrutiny"; (3) Defendants were still working on changes to MCAS; and (4) Defendants failed to provide regulators with the required information and Boeing representatives were "not ready" for their meeting with regulators.

352. On November 11, 2019, Boeing issued a press release announcing that the FAA could re-certify the 737 MAX within the next month and that Boeing would resume delivering airplanes to its customers in December. The press release was titled, *737 MAX Progress Report*, and stated, in relevant part:

***We are working closely with the FAA and other regulatory authorities as we work towards certification and safe return to commercial service, and we are taking the time to answer all of their questions.*** With the rigorous scrutiny being applied, we are confident the MAX will be one of the safest airplanes ever to fly.

While the FAA and other regulatory authorities will determine the timing of certification and return to commercial service, ***Boeing continues to target FAA certification of the MAX flight control software updates during this quarter. Based on this schedule, it is***

*possible that the resumption of MAX deliveries to airline customers could begin in December, after certification, when the FAA issues an Airworthiness Directive rescinding the grounding order.* In parallel, we are working towards final validation of the updated training requirements, which must occur before the MAX returns to commercial service, and which we now expect to begin in January. . . .

*At each step of this process Boeing has worked closely with the FAA and other regulators.* We're providing detailed documentation, had them fly in the simulators, and helped them understand our logic and the design for the new procedures, software and proposed training material to ensure that they are completely satisfied as to the airplane's safety.

353. Defendants' statements were materially false and misleading. It was materially misleading for Defendants to represent that the 737 MAX would be recertified and returned to service in December 2019 when the process was far from over. Among other things: (1) the FAA was still in the midst of evaluating the 737 MAX for recertification; (2) Acting FAA Administrator Elwell had asked Defendant Muilenburg to "slow down its talk of progress" regarding the recertification and return to service of the 737 MAX so that the FAA had the appropriate space to "exercise scrutiny"; (3) FAA Administrator Dickson did not agree with Defendant Muilenburg's timeline for the 737 MAX's recertification and return to service or his request to deliver airplanes before they were cleared by the FAA; and (4) Defendants were still working on changes to MCAS.

## **II. Defendants' False and Misleading Statements About the 737 MAX's Production Rate and Backlog**

354. On January 30, 2019, Boeing announced its financial results for the fourth quarter and full-year 2018, and its guidance for 2019. During a conference call that day, Defendant Muilenburg told investors that Boeing would be *ramping up* its production of the 737 MAX. He stated:

Our customers continue to recognize the superior value proposition of our more fuel-efficient airplanes, as reflected in the strong intake of new orders we saw last year. . . . starting with the narrow-body,

*our current production rate of 52 per month and planned increase to 57 this year is based on our backlog of more than 4,700 aircraft and a production skyline that is sold out into early next decade. The 737 program added 13 new customers during the year, and the MAX family surpassed 5,000 net orders in December. We continue to assess the market upward pressure on the 737 production rate.*

355. Defendant Smith similarly represented that:

*The ramp-up on the 737 MAX production continues, and we expect 737 MAX to account for approximately 90% of total 737 deliveries in 2019. In all, BCA is expected to deliver between 895 and 905 airplanes for the full year. Incorporated in this delivery guidance assumption are planned 737 and 787 production rate increases and the intercompany deliveries of the military aircraft from BCA to BDS. . . .*

As we look towards the remainder of the year, our key focus areas are continuing to manage the 737 recovery progress within our factory and throughout our supply chain, *including assuring rate readiness for a smooth transition to 57 a month . . . .*

356. In response to a question from a Morgan Stanley & Co. LLC analyst about the production rate for the 737 MAX, Defendant Muilenburg again stated:

*[W]e're moving forward on our plans to ramp up to 57 a month during the year. . . . We still have some work to do before we move the entire line to 57 a month, and we're going to be very, very disciplined in that process. Again, we're making good progress. We know exactly what needs to be done, but we're going to just look at this through very clear eyes and step through it day by day, week by week, and make sure that we in a very disciplined and smooth way move to 57 a month.*

357. An analyst from Baird & Co., Inc. then asked about the orders Boeing had received for the 737 MAX. Defendant Muilenburg responded:

*[W]e continue to see strong order momentum there. . . . So you see continued momentum on the MAX sales front.*

*That airplane is creating value in the market for our customers, and we are oversold against our production profile. We talked earlier about ramping up to 57 a month. We are oversold against that profile. We're filling skyline slots way out in 2023. We continue to see upward market pressure overall on the production*

*rate as a result. And we think the demand for that airplane continues to be sustained.*

And there's always timing variability, ***but in terms of the MAX, the demand signals in the marketplace continue to be very strong.***

358. Boeing's earning presentation contained similar statements about how Boeing “[i]ncreased 737 [production] rate to 52/mo,” had a “***robust backlog of \$412B***” and that the “***737 MAX family surpassed 5,000 net orders.***”

359. On February 6, 2019, Defendant Smith participated in a question-and-answer segment during the 40th Annual Cowen Aerospace and Defense Conference. During the conference, Defendant Smith stated that Boeing's production rate for the 737 MAX was “***getting stable at 52 and getting the confidence in the rate readiness to go up to 57, which is to plan. So, certainly the market demand is there. We're in a oversold position.***” Later in the session, Defendant Smith reiterated that Boeing was increasing the production rate for the 737 MAX, “***going up to 52 and getting to 57. That's a driver.***”

360. These statements were materially false and misleading. It was materially misleading for Defendants to disclose a production rate and backlog for the 737 MAX when its sales and production could no longer be reasonably relied on in light of the safety problems that rendered the airplane fundamentally unsafe. Among other things: (1) MCAS was susceptible to a single point of failure, which was contrary to industry norms, federal regulations, and the Company's own historical practices; (2) Defendants made fundamental and deadly changes to MCAS that greatly expanded its scope and the circumstances under which it could activate; (3) Defendants concealed these changes from the FAA, which led to the FAA certifying the 737 MAX and recommending Level B differences training based on incorrect facts about MCAS; (4) Defendants knew in August 2017 that the AOA Disagree Alert was inoperable on 80% of the 737 MAX airplanes that it had delivered so far, but decided to wait until 2020 to fix the AOA Disagree

Alert, producing and delivering 737 MAX airplanes with inoperable AOA Disagree Alerts in the meantime; (5) Defendants misled the FAA into removing all references to MCAS from the 737 MAX’s FCOM despite knowing that the process of overriding MCAS was complex and could result in “catastrophic” consequences if not performed quickly enough, and that it had taken one of Boeing’s test pilots more than 10 seconds to identify and disable MCAS; (6) Defendants did not disclose MCAS to pilots, train them on it, or explain how to deactivate it in the 737 MAX’s FCOM; (7) MCAS was an entirely new system that had never been used on one of Boeing’s commercial airplanes before; (8) MCAS could not be disabled in the same way that the automatic flight systems on all other Boeing airplanes could be disabled; (9) Boeing employees raised significant concerns about the safety of the 737 MAX; (10) Defendants knew MCAS had caused the Lion Air crash; (11) Defendants knew that the assumptions on which Boeing had based its four second reaction time estimate were flawed; (12) Defendants had requested permission from the FAA to update the 737 MAX’s FCOM to include references to MCAS and suggested that pilots receive Level D differences training on the 737 MAX using a full-flight simulator; and (13) Defendants were updating MCAS to make it safer.

361. On February 8, 2019, Boeing filed the 2018 10-K. In a section describing the 737 Program, Boeing stated: “***We continue to plan to increase the production rate to 57 per month in 2019.***” The “Program Development Chart” for the 737 Program stated that Boeing’s ***initial deliveries of the 737 MAX 7 and 737 MAX 10 were scheduled for 2019 and 2020***, respectively.

362. These statements were materially false and misleading. It was materially misleading for Defendants to disclose a production rate and backlog for the 737 MAX when its sales and production could no longer be reasonably relied on in light of the safety problems that rendered the airplane fundamentally unsafe. Among other things: (1) MCAS was susceptible to a

single point of failure, which was contrary to industry norms, federal regulations, and the Company's own historical practices; (2) Defendants made fundamental and deadly changes to MCAS that greatly expanded its scope and the circumstances under which it could activate; (3) Defendants concealed these changes from the FAA, which led to the FAA certifying the 737 MAX and recommending Level B differences training based on incorrect facts about MCAS; (4) Defendants knew in August 2017 that the AOA Disagree Alert was inoperable on 80% of the 737 MAX airplanes that it had delivered so far, but decided to wait until 2020 to fix the AOA Disagree Alert, producing and delivering 737 MAX airplanes with inoperable AOA Disagree Alerts in the meantime; (5) Defendants misled the FAA into removing all references to MCAS from the 737 MAX's FCOM despite knowing that the process of overriding MCAS was complex and could result in "catastrophic" consequences if not performed quickly enough, and that it had taken one of Boeing's test pilots more than 10 seconds to identify and disable MCAS; (6) Defendants did not disclose MCAS to pilots, train them on it, or explain how to deactivate it in the 737 MAX's FCOM; (7) MCAS was an entirely new system that had never been used on one of Boeing's commercial airplanes before; (8) MCAS could not be disabled in the same way that the automatic flight systems on all other Boeing airplanes could be disabled; (9) Boeing employees raised significant concerns about the safety of the 737 MAX; (10) Defendants knew MCAS had caused the Lion Air crash; (11) Defendants knew that the assumptions on which Boeing had based its four second reaction time estimate were flawed; (12) Defendants had requested permission from the FAA to update the 737 MAX's FCOM to include references to MCAS and suggested that pilots receive Level D differences training on the 737 MAX using a full-flight simulator; and (13) Defendants were updating MCAS to make it safer.

363. On April 24, 2019, Boeing filed the 1Q2019 10-Q with the SEC. During a conference call with investors the next day, April 25, 2019, Defendant Muilenburg reassured investors Boeing's "**737 program has a backlog of more than 4,400 aircraft and a production skyline that is sold out into early next decade.**"

364. Defendant Muilenburg's statement was materially false and misleading. It was materially misleading for Defendants to disclose the backlog for the 737 MAX when its sales could no longer be reasonably relied on in light of the safety problems that rendered the airplane fundamentally unsafe. Among other things: (1) MCAS was susceptible to a single point of failure, which was contrary to industry norms, federal regulations, and the Company's own historical practices; (2) Defendants made fundamental and deadly changes to MCAS that greatly expanded its scope and the circumstances under which it could activate; (3) Defendants knew by February 2019, at the latest, that Forkner had concealed these changes from the FAA and that the FAA had certified the 737 MAX and recommended Level B differences training based on incorrect facts about MCAS; (4) Defendants knew in August 2017 that the AOA Disagree Alert was inoperable on 80% of the 737 MAX airplanes that it had delivered so far, but decided to wait until 2020 to fix the AOA Disagree Alert, producing and delivering 737 MAX airplanes with inoperable AOA Disagree Alerts in the meantime; (5) Defendants misled the FAA into removing all references to MCAS from the 737 MAX's FCOM despite knowing that the process of overriding MCAS was complex and could result in "catastrophic" consequences if not performed quickly enough, and that it had taken one of Boeing's test pilots more than 10 seconds to identify and disable MCAS; (6) Defendants did not disclose MCAS to pilots, train them on it, or explain how to deactivate it in the 737 MAX's FCOM; (7) MCAS was an entirely new system that had never been used on one of Boeing's commercial airplanes before; (8) MCAS could not be disabled in the same way that

the automatic flight systems on all other Boeing airplanes could be disabled; (9) Boeing employees raised significant concerns about the safety of the 737 MAX; (10) Defendants knew MCAS had caused both the Lion Air and Ethiopian Airlines crashes; (11) Defendants knew that the assumptions on which Boeing had based its four second reaction time estimate were flawed; (12) Defendants had requested permission from the FAA to update the 737 MAX's FCOM to include references to MCAS and suggested that pilots receive Level D differences training on the 737 MAX using a full-flight simulator; (13) the FAA was still in the midst of evaluating the 737 MAX for recertification; and (14) Defendants were still working on changes to MCAS.

### **III. Defendants' False and Misleading Statements Concerning the Effectiveness of Boeing's Internal Disclosure Controls and Procedures**

365. Throughout the relevant time period, Defendants repeatedly and falsely certified to investors that they had established effective internal disclosure controls and procedures for the Company.

366. In the 2017 10-K, for example, Boeing stated:

Evaluation of Disclosure Controls and Procedures.

Our Chief Executive Officer and Chief Financial Officer have evaluated our disclosure controls and procedures as of December 31, 2015 and have concluded that these disclosure controls and procedures are effective to ensure that information required to be disclosed by us in the reports that we file or submit under the Securities Exchange Act of 1934 is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms and is accumulated and communicated to our management, including the Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

367. Boeing made substantively identical disclosures in the 2Q2017 10-Q, 3Q2017 10-Q, 1Q2018 10-Q, 2Q2018 10-Q, 3Q2018 10-Q, 2018 10-K, 1Q2019 10-Q, 2Q2019 10-Q, and 3Q2019 10-Q.

368. Along with the 2017 10-K, Defendants Muilenburg and Smith provided a certification concerning Boeing's internal disclosure controls and procedures pursuant to Section 302 of SOX. Defendant Muilenburg and Defendant Smith each stated:

1. I have reviewed this annual report on Form 10-K of The Boeing Company;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;  
...
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;  
...
  - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

369. Defendants Muilenburg and Smith provided identical certifications in the 2Q2017 10-Q, 3Q2017 10-Q, 1Q2018 10-Q, 2Q2018 10-Q, 3Q2018 10-Q, 2018 10-K, 1Q2019 10-Q, 2Q2019 10-Q, and 3Q2019 10-Q.

370. These statements were materially false and misleading and omitted to state material facts. It was materially misleading for Defendants to represent that their internal disclosure controls and procedures were effective during the relevant period when that was not the case and Defendants Muilenburg and Smith had repeatedly and successfully evaded those controls to perpetrate Defendants' fraud. Among other things: (1) Defendants knew but failed to inform investors that Boeing and Chief Technical Pilot Forkner had defrauded the FAA during the certification process; (2) Defendants knew but failed to inform investors that Boeing employees had raised serious quality control and safety concerns with the 737 MAX; (3) Defendants knew in August 2017 that the AOA Disagree Alert was inoperable on 80% of the 737 MAXs that Boeing had delivered so far but failed to inform investors of this key fact; and (4) Defendants knew almost immediately that MCAS was responsible for the Lion Air and Ethiopian Airlines crashes but withheld this information from investors.

#### **IV. Defendants' Misrepresentations About Boeing's Regulatory Compliance**

371. Boeing's 2017 10-K also provided that, "*[i]n the U.S., our commercial aircraft products are required to comply with FAA regulations governing production and quality systems, airworthiness and installation approvals, repair procedures and continuing operational safety.*" This statement was repeated verbatim in the 2018 10-K.

372. It was materially misleading for Defendants to state that Boeing was required to comply with all applicable FAA regulations while failing to disclose that it was not actually in compliance with those regulations. Among other things: (1) Boeing and Chief Technical Pilot Forkner conspired to defraud – and did in fact defraud – the FAA during the certification process, a fact Defendant Muilenburg was aware of for months before informing the FAA; (2) the FAA fined Boeing millions of dollars for failing to comply with the Settlement Agreement; (3) Defendants Muilenburg and other members of Boeing management disregarded serious quality

control and safety concerns raised by Boeing employees to save money, quickly certify the 737 MAX, and preserve the minimal level of pilot training that Defendants had promised Boeing's customers; (4) Defendants knew in August 2017 that the AOA Disagree Alert was inoperable on 80% of the 737 MAXs that it had delivered so far, but decided to wait until 2020 to fix the AOA Disagree Alert, producing and delivering 737 MAXs with inoperable AOA Disagree Alerts in the meantime; (5) Defendants improperly pressured the FAA to re-certify the 737 MAX on an accelerated timeline; and (6) Boeing officials inappropriately coached test pilots during MCAS simulator testing in an effort to cover up important information that may have contributed to the Lion Air and Ethiopian Airlines crashes.

#### **SUMMARY OF DEFENDANTS' SCIENTER**

373. The TIAA Plaintiffs repeat and re-allege each and every allegation contained in each of the foregoing paragraphs as if fully set forth herein.

374. Defendants Muilenburg and Smith acted with scienter with respect to the materially false and misleading statements of material fact set forth above because they knew, or at the very least recklessly disregarded, that those statements were false when made. As the most senior executives of Boeing during the relevant time period, their scienter, as well as the scienter of other Boeing executives, is imputable to Boeing.

375. Defendants knew, or at the very least, recklessly disregarded, that the 737 MAX was fundamentally unsafe and had been certified by the FAA based on incorrect information about MCAS. Specifically, Defendants designed the 737 MAX so that MCAS relied on data from only one of the airplane's two AOA sensors, which was contrary to industry norms, federal regulations, and the Company's own historical practices. When Defendants discovered in August 2017 that the AOA Disagree Alert was only functional on the less than 20% of airplanes that were also

equipped with the optional AOA Indicator, Defendants concealed this fact from investors and chose to wait until 2020 to fix the defect. Incredibly, Defendants continued manufacturing and delivering 737 MAXs with non-functioning AOA Disagree Alerts during this time, while admitting to Southwest that a functioning AOA Disagree Alert would have prevented the Lion Air crash.

376. Defendants also failed to inform the FAA that – after applying for certification of the airplane – they had greatly expanded the scope of MCAS and the circumstances under which it could activate. As set forth in the DPA and its accompanying Statement of Facts, Boeing admitted that “the FAA AEG’s provisional ‘Level B’ differences-training determination had been based in part on outdated and inaccurate information about MCAS.” Despite this knowledge, Boeing admitted that it “intentionally withheld and concealed from the FAA its knowledge of MCAS’s expanded operational scope.” Boeing also admitted that it made “misleading statements to the FAA AEG about MCAS, and in reliance on those statements and omissions, the FAA AEG agreed to delete all information about MCAS from the 737 MAX FSB Report.” Finally, Boeing admitted that, because of its “intentional withholding of information from the FAA AEG, the final version of the 737 MAX FSB Report lacked information about MCAS, and relevant portions of this 737 MAX FSB Report were materially false, inaccurate, and incomplete. In turn, airplane manuals and pilot-training materials for U.S.-based airlines lacked information about MCAS, and relevant portions of these manuals and materials were similarly false, inaccurate, and incomplete as a result.” Defendants knew by February 2019 when they produced documents to the DOJ in connection with the Criminal Action – at the very latest – that they and Forkner had lied to the FAA during the certification process regarding the design and operational scope of MCAS, yet they did nothing to correct this fact or ensure that the 737 MAX was properly certified. Indeed,

Defendant Muilenburg confirmed during his testimony before the Senate Commerce, Science, and Transportation Committee that he had known about Forkner’s and Gustavsson’s instant message exchange before the Ethiopian Airlines crash, at least seven months prior.

377. Defendants lied to the FAA about the nature and scope of MCAS because telling the truth would have jeopardized one of the “design objectives” of the 737 MAX: Level B differences training for pilots. A higher level of differences training would have been prohibitively expensive and time-consuming for airlines, and, by extension, Boeing. Because of the number of full-motion 737 MAX simulators in service, it would have taken years for pilots to complete Level D differences training, cost the airlines millions of dollars in revenue, and significantly delayed the airlines’ ability to get their 737 MAX airplanes into service. For this reason, Defendants were concerned about emphasizing MCAS to the FAA because “there may be greater certification and training impact.” Defendants’ solution was to “continue to use the MCAS nomenclature internally” while “[e]xternally we would communicate it as an addition to Speed Trim.”

378. For this reason, Forkner celebrated the FAA provisionally approving Level B differences training for pilots and bragged about “jedi-mind tricking” foreign regulators into accepting a similar level of training for their pilots. Forkner also boasted to his colleagues that he had made foreign airlines – including Lion Air – feel “stupid” about requesting additional simulator-based training. Other employees admitted that they had not “been forgiven by god for the covering up I did last year” and “used the words ‘misleading’ and ‘mischaracterization’ a lot over the last two years in relation to [t]his [MAX] program.”

379. Relatedly, Defendants knew, or at the very least, recklessly disregarded, that the Functional Hazard Assessment that they performed of MCAS and the resulting “hazardous” classification was completely unmoored from reality. It had taken one of Boeing’s own test pilots

more than ten seconds to combat MCAS, a situation the Company itself described as “catastrophic.” And Defendants’ “hazardous” classification of MCAS was dependent on “pilot training to recognize the runway and use of teamwork.” But Defendants did not even tell pilots about MCAS or include any reference to it in the airplane’s flight manual, let alone provide pilots with “adequate training” such that they could identify and disable a system in four seconds that they did not know existed.

380. Defendants also knew, or at the very least, recklessly disregarded, that existing flight procedures were woefully insufficient to address MCAS because MCAS was an entirely new system that had never been used on one of Boeing’s commercial airplanes before and could not be disabled in the same way that the automatic flight systems on all other Boeing airplanes could be disabled. No later than November 1, 2012, Defendants were aware that it had taken one of the Company’s own test pilots more than ten seconds to recognize and respond to MCAS activation and the resulting “catastrophic consequences.” Between 2015 and 2018, Boeing issued at least six separate internal MCAS Coordination Sheets referencing the “catastrophic” consequences of a greater than ten second pilot reaction time. At least four different Boeing ARs reviewed and approved the Coordination Sheets – in addition to the numerous other Boeing employees who prepared or were copied on the Coordination Sheets – yet this information was withheld from the FAA and Boeing’s customers and investors.

381. Moreover, after the Lion Air crash on October 29, 2018, Defendants quickly determined that MCAS was to blame and that the pilots’ behavior “didn’t quite follow the assumptions that [Boeing] had based the design on.” Nevertheless, Defendants withheld the truth from investors and continued instructing pilots to follow “existing flight crew procedures” to combat erroneous MCAS activation. At the same time – in an implicit admission that pilots had

**not** been adequately trained and existing flight procedures were **not** sufficient to address MCAS – Defendants secretly requested permission from the FAA to update the 737 MAX’s flight manual to include information about MCAS and suggested that pilots receive Level D simulator differences training on the 737 MAX. Defendants also began covertly working on software updates to MCAS to make it safer but refused to ground the 737 MAX in the meantime.

382. Defendants also disregarded the dire warnings and pleas from Boeing’s employees regarding the safety of the 737 MAX. Defendants rejected Ewbank’s suggestion to install a synthetic airspeed system on the 737 MAX – which would have likely prevented the Lion Air and Ethiopian Airlines crashes – on three separate occasions due to “cost and potential (pilot) training impact.” Defendants also ignored Pierson’s repeated concerns regarding the safety and quality control problems he was witnessing in the production of the 737 MAX at Boeing’s Renton, Washington facility. Pierson’s concerns were so significant that he raised them directly with Defendant Muilenburg, Boeing’s General Counsel, and Boeing’s entire Board of Directors. Pierson’s safety concerns were dismissed by Defendants because Boeing was a “profit making organization.”

383. Defendants also knew or recklessly disregarded that their disclosed production rate and backlog for the 737 MAX could no longer be reasonably relied on in light of the safety problems that rendered the airplane fundamentally unsafe. Pierson and other Boeing employees warned Defendants – including Defendant Muilenburg directly – that the “schedule pressure” from Defendants’ announced production rates was creating “chaos” in Boeing’s factories and “creating a culture where employees are either deliberately or unconsciously circumventing establishes processes.” When Pierson and others asked Defendants to stop or slow down production,

Defendants “responded categorically that a pause cannot happen because of the severe impact it would have on suppliers, on airline customers and on the company’s stock price.”

384. Defendants also knew or recklessly disregarded that, because the 737 MAX was fundamentally unsafe and could not be fixed by way of a quick and easy change to MCAS, a rapid re-certification and return to service of the airplane was not possible. The FAA told Defendant Muilenburg as much and asked Defendants to “slow down [their] talk of progress” so that the agency could exercise the appropriate level of scrutiny. After Defendants ignored the FAA’s pleas for patience, FAA Administrator Dickson chastised Defendant Muilenburg for “putting pressure on the agency to move faster in approving the return of the company’s 737 Max jet” and “suggesting the plane would be recertified in [2019].” FAA Administrator Dickson also stated that he “felt as though he was being manipulated” by Defendants.

385. In light of Defendants’ knowledge regarding the fundamentally unsafe nature of the 737 MAX and the way in which it was certified, Defendants also knew or recklessly disregarded that Boeing was not in compliance with all applicable FAA regulations during this time. The Settlement Agreement required “executive-level” involvement in several key areas of regulatory compliance, including safety management. In assessing an additional \$5.4 million in penalties against Boeing for its failure to meet its obligations under the Settlement Agreement, the FAA found Boeing’s regulatory compliance failures to be “numerous, varied, and called into question Boeing’s performance under several other sections of the [Settlement] Agreement.”

386. Defendants Muilenburg and Smith also knew or recklessly disregarded that their representations about Boeing’s internal disclosure controls and procedures were false because they repeatedly and successfully evaded those controls to perpetrate their fraud.

387. Indeed, Defendants' scienter is evidenced by the resignation of Defendant Muilenburg in the wake of the Lion Air and Ethiopian Airlines crashes. Indeed, the press release announcing Defendant Muilenburg's departure makes clear that it was the result of his repeated lies to regulators and investors and the improper tone at the top that he created at the Company. As Calhoun described it, Defendant Muilenburg "turbocharged Boeing's production rates before the supply chain was ready, a move that sent Boeing shares to an all-time high but compromised quality." Calhoun went on, "I'll never be able to judge what motivated [Defendant Muilenburg], whether it was a stock price that was going to continue to go up and up, or whether it was just beating the other guy to the next rate increase." "***If anybody ran over the rainbow for the pot of gold on stock, it would have been him.***"

388. Defendants' scienter is also evidenced by their actions after the Lion Air and Ethiopian Airlines crashes. As described in the Senate Committee Report, "Boeing inappropriately influenced FAA human factor simulator testing of pilot reaction times involving a [MCAS] system failure." The Committee concluded that:

***Boeing officials involved in the conduct of this test had established a pre-determined outcome*** to reaffirm a long-held human factor assumption related to pilot reaction time to a runaway stabilizer. ***Boeing officials inappropriately coached test pilots in the MCAS simulator testing contrary to testing protocol.*** This test took place over a year after the second 737 MAX crash and during recertification efforts. ***It appears, in this instance, FAA and Boeing were attempting to cover up important information that may have contributed to the 737 MAX tragedies.***

389. Finally, Defendants' scienter is evidenced by the fact that the 737 MAX was an integral part of Boeing's core operations. By 2010, more than 50% of Boeing's revenues and more than 60% of its earnings from operations were attributable to its BCA segment, of which the 737 was the driving force. More than 80% of the commercial airplanes Boeing delivered that year were 737s, and nearly 85% of Boeing's outstanding orders were for 737s. By 2018 – the last full

year before the 737 MAX was grounded – 60% of Boeing’s revenues and 66% of Boeing’s earnings from operations were attributable to its BCA segment. More than 75% of Boeing’s backlog was for 737 MAXs, and the Company received more than \$600 billion in orders for the airplane. Indeed, during Boeing’s January 30, 2019 conference call, Defendant Smith told investors that Defendants expected the 737 MAX to account for “approximately 90%” of 737 deliveries in 2019.

#### **PRESUMPTION OF RELIANCE**

390. The TIAA Plaintiffs intend to rely upon the presumption of reliance established by the fraud-on-the-market doctrine in that, among other things: (1) Defendants made public misrepresentations or failed to disclose material facts during the relevant time period; (2) the omissions and misrepresentations were material; (3) Boeing common stock traded in an efficient market; (4) the misrepresentations alleged would tend to induce a reasonable investor to misjudge the value of Boeing common stock; and (5) the TIAA Plaintiffs purchased or acquired Boeing common stock between the time Defendants misrepresented or failed to disclose material facts and the time when the true facts were disclosed, without knowledge of the misrepresented or omitted facts.

391. The market for Boeing common stock was open, well-developed and efficient at all relevant times. As a result of the aforementioned materially false and misleading statements, Boeing common stock traded at artificially inflated prices during the relevant period. The artificial inflation began to dissipate as the market began to learn the nature and extent of Defendants’ misrepresentations regarding the 737 MAX’s certification and re-certification, safety and reliability, production rate and backlog, and return-to-service timeline, as well as Defendants’

statements regarding MCAS, Boeing's regulatory compliance, and the effectiveness of Boeing's internal disclosure controls and procedures.

392. At all relevant times, the market Boeing common stock was efficient for the following reasons, among others: (1) Boeing filed periodic reports with the SEC; (2) Boeing common stock was listed and actively traded on the NYSE during the time that the TIAA Plaintiffs purchased or acquired Boeing common stock; (3) numerous analysts followed Boeing; and (4) Boeing regularly communicated with public investors via established market communication mechanisms, including through regular disseminations of press releases on the major news wire services and through other wide-ranging public disclosures, such as communications with the financial press, securities analysts and other similar reporting services.

393. The TIAA Plaintiffs relied on the market price of Boeing common stock, which reflected all the information in the market, including the misstatements by Defendants.

394. In addition, or in the alternative, the TIAA Plaintiffs are entitled to a presumption of reliance pursuant to *Affiliated Ute Citizens of Utah v. United States*, 406 U.S. 128 (1972), and its progeny, because the claims asserted herein are predicated in part upon omissions of material fact that Defendants had a duty to disclose.

### **LOSS CAUSATION**

395. As the truth about Defendants' fraud was gradually but only partially revealed to the market, the price of Boeing common stock plummeted and the TIAA Plaintiffs suffered significant investment losses.

396. Defendants' wrongful conduct, as alleged herein, directly and proximately caused the economic loss suffered by the TIAA Plaintiffs. During the time that the TIAA Plaintiffs purchased Boeing common stock, the market price of that common stock was artificially inflated as a direct result of Defendants' materially false and misleading statements. Specifically,

Defendants' statements regarding the 737 MAX's certification and re-certification, safety and reliability, production rate and backlog, and return-to-service timeline, as well as Defendants' statements regarding MCAS, Boeing's regulatory compliance, and the effectiveness of Boeing's internal disclosure controls and procedures caused the price of Boeing common stock to be artificially inflated.

397. As a series of partial but inadequate disclosures were issued partially revealing the false and misleading nature of Defendants' statements regarding the 737 MAX's certification and re-certification, safety and reliability, production rate and backlog, and return-to-service timeline, as well as statements regarding MCAS, Boeing's regulatory compliance, and the effectiveness of Boeing's internal disclosure controls and procedures – and as the foreseeable risks previously concealed by Defendants' material misrepresentations and omissions partially materialized – the price of Boeing common stock plummeted and the TIAA Plaintiffs were damaged.

398. On March 10, 2019, Ethiopian Airlines flight 302 departed Addis Ababa, Ethiopia, for Nairobi, Kenya. One minute into the flight, MCAS took over the airplane and forced its nose downward into a steep dive. The pilots fought back and briefly regained control of the airplane before MCAS reactivated and pushed the plane downward into another steep dive. The pilots tried to follow the procedures confusingly outlined by Boeing in the months following the Lion Air crash, but were unable to regain control of the airplane. The airplane crashed in a field at nearly 700 miles per hour, killing everyone on board.

399. Given the stark similarities between the Lion Air and Ethiopian Airlines crashes – both occurred within five months of each other, in the first 15 minutes of flight, and on brand-new 737 MAX airplanes with experienced pilots at the helm – international regulators and airlines ordered the grounding of the 737 MAX. Over the next two days, regulators in China, Indonesia,

and Mongolia grounded the 737 MAX, and Ethiopian Airlines, Aerolineas Argentina, Cayman Airways, Comair, Eastar Jet, Gol Transportes Aereos, and Royal Air Maroc, among others, all stopped flying their 737 MAXs.

400. On March 12, 2019, regulators in Singapore, India, Turkey, Australia, and Malaysia, among others, followed suit and grounded the 737 MAX, while the United Kingdom banned the 737 MAX from its airspace altogether. The European Union Aviation Safety Agency likewise suspended all 737 MAX flights in Europe due to “similarities with the Lion Air accident data.”

401. The Ethiopian Airlines crash and widespread grounding of the 737 MAX was a partial disclosure and partial materialization of the foreseeable risk that Defendants had previously concealed from the investing public. The 737 MAX was fundamentally unsafe and had been certified based on incorrect facts about MCAS. The Ethiopian Airlines crash and widespread grounding of the 737 MAX partially revealed to the market that Defendants’ prior representations were false or materially misleading. Boeing’s stock **plummeted more than 11%** in response to this news, from a closing price of \$422.54 per share on March 8, 2019, to a closing price of \$375.41 on March 12, 2019.

402. On Sunday, March 17, 2019, *The Seattle Times* released an investigative report titled, *Flawed Analysis, failed oversight: How Boeing, FAA certified the suspect 737 MAX flight control system*. The report revealed that “the original safety analysis that Boeing delivered to the FAA for a new flight control system on the MAX – a report used to certify the plane as safe to fly – had several crucial flaws.” According to “current and former engineers involved with the evaluations or familiar with the document,” Boeing’s safety analysis:

- Understated the power of the new flight control system, which was designed to swivel the horizontal tail to push the nose of the

plane down to avert a stall. *When the planes later entered service, MCAS was capable of moving the tail more than four times farther than was stated in the initial safety analysis document.*

- *Failed to account for how the system could reset itself each time a pilot responded,* thereby missing the potential impact of the system repeatedly pushing the airplane's nose downward.
- *Assessed a failure of the system as one level below "catastrophic."* But even that "hazardous" danger level should have precluded activation of the system based on input from a single sensor — and yet that's how it was designed.

403. The report also partially revealed the extent to which Boeing had control over the certification of the 737 MAX, and MCAS, in particular. "Early on in certification of the 737 MAX, the FAA safety engineering team divided up the technical assessments that would be delegated to Boeing versus those they considered more critical and would be retained within the FAA." However, about halfway through the certification process, Boeing management "prodded" the FAA to "speed the process" and "re-evaluate what would be delegated" for its review. "In this atmosphere, the System Safety Analysis on MCAS, just one piece of the mountain of documents needed for certification, was delegated to Boeing."

404. Finally, the report noted that, "[b]oth Boeing and the FAA were informed of the specifics of this story and were asked for responses 11 days ago, ***before the second crash*** of a 737 MAX on March 10."

405. Boeing's stock fell nearly 2% in response to *The Seattle Times* report, from a closing price of \$378.99 on March 15, 2019, to a closing price of \$372.28 on March 18, 2019. *The Seattle Times* report was a partial disclosure and partial materialization of the foreseeable risk that Defendants had previously concealed from the investing public. The 737 MAX was fundamentally unsafe and had been certified based on incorrect facts about MCAS. *The Seattle Times* article

partially revealed to the market that Defendants' prior representations were false or materially misleading.

406. On March 21, 2019, *The New York Times* released an article titled, *Doomed Boeing Jets Lacked 2 Safety Features that Company Sold Only as Extras*. The article revealed for the first time that “[a]s the pilots of the doomed Boeing jets in Ethiopia and Indonesia fought to control their planes, they lacked two notable safety features in their cockpits. One reason: Boeing charged extra for them.” The article explained that the two features – the AOA Disagree Alert and AOA Indicator – could have helped the Lion Air and Ethiopian Airlines pilots identify and combat MCAS. As Bjorn Fehrm, an aeronautical and economical analyst at Leeham News explained, the features are “*critical, and cost almost nothing for the airlines to install.*” “*Boeing charges for them because it can. But they're vital for safety.*”

407. *The New York Times* article was a partial disclosure and partial materialization of the foreseeable risk that Defendants had previously disclosed to the investing public. The 737 MAX was fundamentally unsafe. *The New York Times* report partially revealed to the market that Defendants' prior representations were false or materially misleading. Boeing's stock fell nearly 1% in response to *The New York Times* report, from a closing price of \$376.16 on March 20, 2019, to a closing price of \$372.70 on March 21, 2019.

408. After the markets closed on April 5, 2019, Boeing issued a statement from Defendant Muilenburg providing a “737 MAX Software, Production and Process Update” and proclaiming “We Own Safety.” Defendant Muilenburg stated:

We now know that the recent Lion Air Flight 610 and Ethiopian Airlines Flight 302 accidents were caused by a chain of events, with a common chain link being erroneous activation of the aircraft's MCAS function. *We have the responsibility to eliminate this risk, and we know how to do it. As part of this effort, we're making progress on the 737 MAX software update that will prevent*

*accidents like these from ever happening again.* Teams are working tirelessly, advancing and testing the software, conducting non-advocate reviews, and engaging regulators and customers worldwide *as we proceed to final certification*. I recently had the opportunity to experience the software update performing safely in action during a 737 MAX 7 demo flight. We're also finalizing new pilot training courses and supplementary educational material for our global MAX customers.

409. Defendant Muilenburg also revealed that Boeing was establishing "a committee to review our company-wide policies and processes for the design and development of the airplanes we build. The committee will confirm the effectiveness of our policies and procedures for assuring the highest level of safety on the 737-MAX program, as well as our other airplane programs, and recommend improvements to our policies and procedures."

410. Finally, Defendant Muilenburg revealed that Boeing was "adjusting the 737 production system temporarily to accommodate the pause in MAX deliveries, *allowing us to prioritize additional resources to focus on software certification and returning the MAX to flight*. We have decided to temporarily move from a production rate of 52 airplanes per month to 42 airplanes per month starting in mid-April."

411. Defendant Muilenburg's statements were a partial disclosure and partial materialization of the foreseeable risk that Defendants had previously concealed from the investing public. The 737 MAX was fundamentally unsafe and could not be fixed by way of a quick and easy change to MCAS. The news that MCAS still had not been fixed and that Boeing was adjusting its production schedule to prioritize the recertification and return to service of the 737 MAX partially revealed to the market that Defendants' prior representations were false and materially misleading. Boeing's stock fell over 4% in response, from a closing price of \$391.93 on April 5, 2019, to a closing price of \$374.52 on April 8, 2019.

412. On June 26, 2019, after the market had closed, Boeing released a statement on Twitter regarding a “potential risk that Boeing must mitigate” before the FAA would re-certify the 737 MAX. Boeing also published a statement “on 737 MAX software” on its website. The statement read:

The safety of our airplanes is Boeing’s highest priority. *During the FAA’s review of the 737 MAX software update and recent simulator sessions, the Federal Aviation Administration (FAA) identified an additional requirement that it has asked the company to address through the software changes* that the company has been developing for the past eight months. The FAA review and process for returning the 737 MAX to passenger service are designed to result in a thorough and comprehensive assessment. *Boeing agrees with the FAA’s decision and request, and is working on the required software.* Addressing this condition will reduce pilot workload by accounting for a potential source of uncommanded stabilizer motion. *Boeing will not offer the 737 MAX for certification by the FAA until we have satisfied all requirements for certification of the MAX and its safe return to service.*

413. Boeing’s statements were a partial disclosure and partial materialization of the foreseeable risk that Defendants had previously concealed from the investing public. The 737 MAX was fundamentally unsafe and could not be fixed by way of a quick and easy change to MCAS. The news that MCAS needed additional changes and that the 737 MAX’s recertification and return to service would be delayed partially revealed to the market that Defendants’ prior representations were false or materially misleading. Boeing’s stock fell nearly 3% in response to Boeing’s statements, from a closing price of \$374.94 on June 26, 2019, to a closing price of \$364.02 on June 27, 2019.

414. On July 24, 2019, Boeing filed the 2Q2019 10-Q. During a conference call that day, Defendant Muilenburg hinted at the possibility that production for the 737 MAX could be halted altogether. Defendant Muilenburg stated:

As our efforts to support the 737 MAX's safe return to service continue, we will continue to assess our production plans. *Should*

*our estimate of the anticipated return to service change, we might need to consider possible further rate reductions or other options, including a temporary shutdown of the MAX production.*

415. Defendant Muilenburg's statements were a partial disclosure and partial materialization of the foreseeable risk that Defendants had previously concealed from the investing public. The 737 MAX was fundamentally unsafe and could not be fixed by way of a quick and easy change to MCAS. The news that Boeing might halt the production of the 737 MAX altogether partially revealed to the market that Defendants' prior representations were false or materially misleading. Boeing's stock fell nearly 7% in response over the next two days, from a closing price of \$373.07 on July 23, 2019, to a closing price of \$348.09 on July 25, 2019.

416. On October 18, 2019, *The New York Times* published the instant messages between Forkner and Gustavsson described in Paragraph 137. In an article titled, *Boeing Pilot Complaint of 'Egregious' Issue With 737 Max in 2016*. The article revealed that **Defendants knew in 2016 – months before the 737 MAX was certified by the FAA and years before the Lion Air and Ethiopian Airlines crashes killed 346 people – that MCAS was unsafe**. *The New York Times* noted that the instant messages “strike at Boeing’s defense that it had done nothing wrong regarding the Max because regulators had cleared the plane to fly, and potentially increases the company’s legal exposure as it faces civil and criminal investigations and multiple lawsuits related to both crashes.” As explained by Weak, “[t]his is more evidence that Boeing misled pilots, government regulators and other aviation experts about the safety of the 737 Max.”

417. On Sunday, October 20, 2019, *The Wall Street Journal* reported that an internal Boeing survey from November 2016 revealed that “roughly one in three employees who responded felt ‘potential undue pressure’ from managers regarding safety-related approvals by federal regulators across an array of commercial planes.” “15% of those who responded encountered such situations ‘several times’ or ‘frequently.’” *The Wall Street Journal* noted that “[s]uch conflicts

could be problematic, the survey found, when it came to Boeing engineers who played dual roles designing certain systems on behalf of the plane marker and then certifying the same systems as safe on behalf of the Federal Aviation Administration . . .”

418. *The New York Times* and *The Wall Street Journal* articles were a partial disclosure and partial materialization of the foreseeable risk that Defendants had previously concealed from the investing public. The 737 MAX was fundamentally unsafe and had been certified based on incorrect facts about MCAS. *The New York Times* and *The Wall Street Journal* articles partially revealed to the market that Defendants’ prior representations were false or materially misleading. Boeing’s stock declined **more than 10%** in response, from a closing price of \$369.06 on October 17, 2019, to a closing price of \$331.06 on October 21, 2019.

419. On December 16, 2019, Boeing released a statement “Regarding 737 MAX Production.” Boeing announced:

Throughout the grounding of the 737 MAX, Boeing has continued to build new airplanes and there are now approximately 400 airplanes in storage. We have previously stated that we would continually evaluate our production plans should the MAX grounding continue longer than we expected. As a result of this ongoing evaluation, ***we have decided to prioritize the delivery of stored aircraft and temporarily suspend production on the 737 program beginning next month.***

420. Boeing’s statement was a partial disclosure and partial materialization of the foreseeable risk that Defendants had previously concealed from the investing public. The 737 MAX was fundamentally unsafe and could not be fixed by way of a quick and easy change to MCAS. The news that Boeing was halting its production of the 737 MAX revealed to the market that Defendants’ prior representations were false or materially misleading. Boeing’s stock declined more than 3% in response to this news, from a closing price of \$341.67 on December 13, 2019, to a closing price of \$327.00 on December 16, 2019.

421. On February 25, 2021, the FAA announced that it had assessed an additional \$5.4 million in penalties against Boeing for failing to meet its obligations under the Settlement Agreement. Boeing also agreed to pay an additional \$1.21 million to settle two pending enforcement cases against the Company, for a total of \$6.6 million. As FAA Administrator Dickson explained in a press release, “Boeing failed to meet all of its obligations under the settlement agreement, and the FAA is holding Boeing accountable by impossible additional penalties.” ***“I have reiterated to Boeing’s leadership time and time again that the company must prioritize safety and regulatory compliance,*** and that the FAA will always put safety first in all its decisions.”

422. According to the FAA, “Boeing’s ongoing and planned corrective actions and cure plans have not been effective in remedying th[e] performance deficiencies” in five of the twelve focus areas in the Settlement Agreement. ***“In some of these areas, Boeing’s performance regressed, despite planned and implemented corrective actions and cure plans.”*** With respect to Boeing’s regulatory compliance, in particular, the FAA found Boeing’s shortfalls to be ***“numerous, varied, and called into question Boeing’s performance under several other sections of the [Settlement] Agreement.”***

423. The FAA’s announcement and assessment of \$5.4 million in penalties against Boeing was a partial disclosure and a partial materialization of the foreseeable risk that Defendants had previously concealed from the investing public. The 737 MAX was certified based on incorrect facts about MCAS and Boeing was not in compliance with all applicable FAA regulations. The news that the FAA was assessing additional penalties against Boeing for failing to meet its obligations under the Settlement Agreement and comply with the applicable FAA regulations revealed to the market that Defendants’ prior representations were false or materially

misleading. Boeing stock declined ***nearly 6%*** in response to the news, from a closing price of \$229.34 on February 24, 2021, to a closing price of \$216.45 on February 25, 2021.

**NO SAFE HARBOR**

424. The statutory safe harbor provided for forward-looking statements under certain circumstances does not apply to any of the allegedly false statements pleaded in this Complaint. The specific statements pleaded herein were not “forward-looking statements” nor were they identified as “forward-looking statements” when made. Nor was it stated with respect to any of the statements forming the basis of this Complaint that actual results “could differ materially from those projected.” To the extent there were any forward-looking statements, there were no meaningful cautionary statements identifying important factors that could cause actual results to differ materially from those in the purportedly forward-looking statements. Alternatively, to the extent that the statutory safe harbor does apply to any forward-looking statements pleaded herein, Defendants are liable for those false forward-looking statements because at the time each of those forward-looking statements was made, the particular speaker knew that the particular forward-looking statement was false, and/or the forward-looking statement was authorized and/or approved by an executive officer of Boeing who knew that those statements were false when made.

**FIRST CAUSE OF ACTION**

**Violations of Section 10(b) of the Exchange Act and Rule 10b-5  
Against All Defendants**

425. The TIAA Plaintiffs repeat and re-allege each and every allegation contained in each of the foregoing paragraphs as if fully set forth herein.

426. This cause of action is brought against Defendants Boeing, Muilenburg, and Smith for violations of Section 10(b) of the Exchange Act, 15 U.S.C. § 78j, and Rule 10b-5 promulgated thereunder, 17 C.F.R. § 240.10b-5.

427. Defendants Boeing, Muilenburg, and Smith both directly and indirectly used the means and instrumentalities of interstate commerce in the United States to make the materially false and misleading statements alleged herein to: (1) deceive the investing public, including the TIAA Plaintiffs, as alleged herein; (2) artificially inflate and maintain the market price of Boeing common stock; and (3) cause the TIAA Plaintiffs to purchase Boeing common stock at artificially inflated prices. In furtherance of this unlawful scheme, plan, and course of conduct, Defendants Boeing, Muilenburg, and Smith took the actions set forth above.

428. Defendants Boeing, Muilenburg, and Smith both directly and indirectly: (1) employed devices, schemes, and artifices to defraud; (2) made untrue statements of material fact and/or omitted to state material facts necessary to make the statements not misleading; and (3) engaged in acts, practices, and a course of business that operated as a fraud and deceit on the purchasers of Boeing common stock in an effort to artificially inflate and maintain the market prices for Boeing common stock in violation of Section 10(b) of the Exchange Act and Rule 10b-5.

429. By virtue of their high-level positions at Boeing, Defendants Muilenburg and Smith were authorized to make public statements, and made public statements, on Boeing's behalf. These senior executives were privy to and participated in the creation, development, and issuance of the materially false and misleading statements alleged herein, and/or were aware of Boeing's and their own dissemination of information to the investing public that they recklessly disregarded was materially false and misleading.

430. In addition, Defendants Boeing, Muilenburg, and Smith had a duty to disclose truthful information necessary to render their affirmative statements not materially misleading so

that the market price of Boeing's common stock would be based on truthful, complete, and accurate information.

431. Defendants Boeing, Muilenburg, and Smith acted with knowledge or reckless disregard for the truth of the misrepresented and omitted facts alleged herein, in that they failed to ascertain and disclose the facts, even though such facts were known or readily available to them. Defendants Boeing's, Muilenburg's, and Smith's material misrepresentations and omissions were done knowingly and/or recklessly, and had the effect of concealing the truth with respect to the 737 MAX's certification and re-certification, safety and reliability, production rate and backlog, and return-to-service timeline, as well as the truth about MCAS, Boeing's regulatory compliance, and the effectiveness of Boeing's internal disclosure controls and procedures. By concealing these material facts from investors, Defendants Boeing, Muilenburg, and Smith supported the artificially inflated price of Boeing common stock.

432. The dissemination of the materially false and misleading information, as set forth above, artificially inflated the market price of Boeing common stock. In ignorance of the fact that the market prices were artificially inflated, and relying directly or indirectly upon the materially false and misleading statements made by Defendants, and upon the integrity of the market in which Boeing's common stock trades, or upon the absence of material adverse information that was recklessly disregarded by Defendants, but not disclosed in public statements by Defendants, the TIAA Plaintiffs purchased Boeing common stock at artificially inflated prices. As a series of partial but inadequate disclosures were issued and the foreseeable risks previously concealed by Defendants' material misstatements and omissions partially materialized, the price of Boeing common stock substantially declined.

433. At the time of the material misrepresentations alleged herein, the TIAA Plaintiffs were ignorant of their falsity, and believed them to be true. Had the TIAA Plaintiffs known the truth with respect to the 737 MAX's certification and re-certification, safety and reliability, production rate and backlog, and return-to-service timeline, or the truth about MCAS, Boeing's regulatory compliance, and the effectiveness of Boeing's internal disclosure controls and procedures, which were concealed by Defendants, the TIAA Plaintiffs would not have purchased Boeing common stock, or if they had purchased such common stock, they would not have done so at the artificially inflated prices that they paid.

434. By virtue of the foregoing, Defendants Boeing, Muilenburg, and Smith have violated Section 10(b) of the Exchange Act and Rule 10b-5 promulgated thereunder.

435. As a direct and proximate result of Defendants Boeing's, Muilenburg's, and Smith's wrongful conduct, the TIAA Plaintiffs have suffered damages in connection with their transactions in Boeing common stock.

436. Taking into account, *inter alia*, the tolling of the limitations period by the filing of the class action complaints against Defendants in the Class Action, the TIAA Plaintiffs have brought this claim within two years of discovery of the violations alleged herein, and within five years of the violations alleged herein. Consequently, this action is timely.

### **SECOND CAUSE OF ACTION**

#### **Violations of Section 20(a) of the Exchange Act Against Defendants Muilenburg and Smith**

437. The TIAA Plaintiffs repeat and re-allege each and every allegation contained in each of the foregoing paragraphs as if fully set forth herein.

438. This cause of action is asserted against Defendants Muilenburg and Smith and is based upon Section 20(a) of the Exchange Act, 15 U.S.C. § 78t(a).

439. Each of Defendants Muilenburg and Smith was a controlling person of Boeing within the meaning of Section 20(a) of the Exchange Act.

440. By virtue of their high level positions, and their ownership and contractual rights, substantial participation in, and/or awareness of, Boeing's operations and/or knowledge or reckless disregard of the materially false and misleading statements filed with the SEC or disseminated to the investing public, Defendants Muilenburg and Smith had the power to influence and control, and did in fact influence and control, directly or indirectly, the decision-making of the Company.

441. Defendants Muilenburg and Smith were provided with or had unlimited access to copies of Boeing's press releases, scripts, and other statements alleged herein to be materially false and misleading prior to and/or shortly after these statements were issued and had the ability to prevent the issuance of the statements or cause the statements to be corrected. In particular, Defendants Muilenburg and Smith each had direct and supervisory involvement in the day-to-day operations of Boeing, and therefore are presumed to have had the power to control or influence the particular false and misleading statements giving rise to the securities violations alleged herein.

442. Defendants Muilenburg and Smith culpably participated in Boeing's violation of Section 10(b) and Rule 10b-5 with respect to the First Cause of Action.

443. By reason of the conduct alleged in the First Cause of Action, Boeing is liable for violations of Section 10(b) of the Exchange Act and Rule 10b-5 promulgated thereunder, and Defendants Muilenburg and Smith are liable pursuant to Section 20(a) based on their control of Boeing.

444. Defendants Muilenburg and Smith are liable for the aforesaid wrongful conduct, and are liable to the TIAA Plaintiffs for the substantial damages suffered in connection with their purchases of Boeing common stock.

445. Taking into account, *inter alia*, tolling of the limitations period by the filing of the class action complaints against Defendants in the Class Action, the TIAA Plaintiffs have brought this claim within two years of discovery of the violations alleged herein, and within five years of the violations alleged herein. Consequently, this action is timely.

**PRAYER FOR RELIEF**

WHEREFORE, the TIAA Plaintiffs respectfully request relief and judgment, as follows:

- a. Awarding compensatory damages against Defendants for all damages sustained as a result of Defendants' wrongdoing, in an amount to be proven at trial, including pre-judgment and post-judgment interest thereon;
- b. Awarding the TIAA Plaintiffs punitive damages for Defendants' intentional, malicious, willful, and wanton conduct as detailed above;
- c. Awarding the TIAA Plaintiffs their expenses, attorneys' fees, and costs; and
- d. Such other and further relief as the Court may deem just and proper.

**JURY DEMAND**

The TIAA Plaintiffs hereby demand a trial by jury as to all issues so triable.

Dated: July 25, 2022

Respectfully submitted,

COLLEGE RETIREMENT EQUITIES FUND (CREF STOCK ACCOUNT; CREF GLOBAL EQUITIES ACCOUNT; CREF GROWTH ACCOUNT), TIAA-CREF FUNDS (TIAA-CREF LARGE-CAP GROWTH FUND; TIAA-CREF EQUITY INDEX FUND; TIAA-CREF LARGE-CAP GROWTH INDEX FUND; TIAA-CREF QUANT LARGE-CAP GROWTH FUND; TIAA-CREF GROWTH & INCOME FUND; TIAA-CREF S&P 500 INDEX FUND), TIAA-CREF LIFE FUNDS (TIAA-CREF

LIFE GROWTH EQUITY FUND; TIAA-CREF LIFE STOCK INDEX; TIAA-CREF LIFE GROWTH & INCOME FUND), NUVEEN INVESTMENT FUNDS, INC. (NUVEEN DIVIDEND VALUE FUND; NUVEEN LARGE-CAP SELECT FUND), NUVEEN CORE EQUITY ALPHA FUND, NUVEEN INVESTMENT TRUST (NUVEEN EQUITY MARKET NEUTRAL FUND), NUVEEN S&P 500 BUY-WRITE INCOME FUND, NUVEEN INVESTMENT TRUST II (NUVEEN EQUITY LONG/SHORT FUND; NUVEEN WINSLOW LARGE-CAP GROWTH ESG FUND on behalf of itself and as successor to NUVEEN LARGE-CAP GROWTH FUND, NUVEEN GROWTH FUND, and NUVEEN SYMPHONY LARGE-CAP GROWTH FUND), NUVEEN S&P 500 DYNAMIC OVERWRITE FUND, NUVEEN DOW 30<sup>SM</sup> DYNAMIC OVERWRITE FUND, and NUVEEN GLOBAL INVESTORS FUND PLC (NUVEEN WINSLOW U.S. LARGE-CAP GROWTH ESG FUND),

By: /s/ Andrew D. Campbell

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Of Counsel:

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